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INTERNATIONAL SOYBEAN VARIETY EXPERIMENT

**SIXTH REPORT OF RESULTS
1978**

W. H. Judy, J. A. Jackobs, and
E. A. Engelbrecht-Wiggans



International Soybean Program

INTSOY

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COLLEGE OF AGRICULTURE
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

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Sixth Report of Results

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College of Agriculture
University of Illinois at Urbana-Champaign

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Foreword

The International Soybean Program (INTSOY) is a cooperative program of the University of Illinois at Urbana-Champaign and the University of Puerto Rico, Mayaguez Campus, cooperating with international and national organizations to expand the use of soybeans. INTSOY is primarily oriented to improve soybean production and utilization in the developing nations. The geographic orientation is toward tropical and subtropical areas of the world where protein-calorie nutrition problems tend to be concentrated. However, the perspective is world-wide.

The Sixth International Soybean Variety Evaluation Experiment (ISVEX) was conducted from February, 1978, to March, 1979, by co-operators in 76 countries around the world. ISVEX was initiated in 1973 as the first part of the genetic improvement program of INTSOY. The objectives are to evaluate soybean cultivars (varieties) for wide environmental adaptability and to provide countries with improved cultivars for direct introduction or for use in breeding programs. The response of cultivars is analyzed for high, stable yield and other desirable agronomic characteristics. Other important dividends have been obtained through accumulation of more knowledge about the response of soybeans to different management skills, ranges of temperature and daylength, and various soil conditions. With the cumulative results from more growing seasons and locations, the objectives of this experiment are being attained.

Seeds and materials for the experiment were prepared and distributed by INTSOY at the request of scientists who desired to evaluate soybeans in varying environments. Each of these cooperators provided land, labor, fertilizer, and management necessary for the experiment. These cooperators were responsible for the success of the experiment and we express our thanks and appreciation to each person and his/her organization.

The support provided by the Food and Agriculture Organization of the United Nations (FAO), the International Rice Research Institute (IRRI), the International Institute for Tropical Agriculture (IITA), and the Asian Vegetable Research and Development Center (AVRDC) for shipment of seed and materials to selected countries is gratefully acknowledged.

Leadership in organizing the 1978 ISVEX was provided by Dr. W. H. Judy, with the aid of Assistant Agronomist H. J. Hill and Assistant Programmer B. Schneider. Since the data were collected for this report, Dr. W. H. Judy has left the INTSOY staff to accept a position with the United States Agency for International Development, and Dr. J. A. Jackobs assisted in completing this report. Mr. D. R. Erickson has succeeded Mr. H. J. Hill as Assistant Agronomist and Ms. E. A. Engelbrecht-Wiggans now serves as Assistant Statistician.

INTSOY is pleased to add the Sixth Report of Results of ISVEX to the INTSOY Publication Series. The First, Second, Third, Fourth and Fifth Reports of ISVEX are designated 8, 11, 15, 16, and 19, respectively, in the series.

William N. Thompson
Director
International Soybean Program (INTSOY)

INTERNATIONAL SOYBEAN VARIETY EXPERIMENT

Sixth Report of Results

This publication is the sixth report of results from the International Soybean Variety Evaluation Experiment (ISVEX), organized in 1973 by the International Soybean Program (INTSOY) of the University of Illinois and the University of Puerto Rico at Mayaguez, under a contract with the Agency for International Development, U. S. Department of State.

ISVEX was designed to meet the following objectives:

1. To test the adaptation of soybean cultivars (varieties) under a wide range of environmental conditions.
2. To provide research workers with an opportunity to compare local and introduced cultivars.
3. To provide a source of new germplasm which a cooperator can use directly or incorporate into a breeding program.
4. To identify areas of the world that have the potential for soybean production.
5. To evaluate the response of soybeans to different environments.

MATERIALS AND METHODS - ISVEX SITES

Procedures

Instructions for management and data collection for the ISVEX were sent with the seed shipment to each cooperator. Soybean seed for planting was provided to each cooperator in individual row packages. Granular inoculant was provided for distribution in the row with the seed prior to covering the seed with soil. The experiment was designed as a randomized complete block with four replications. Each variety was planted in a plot once in each block. The plot consisted of four rows 5m long and 60cm apart. All observations except root nodule activity and abundance were obtained from the center two rows. The nodule data were obtained from the border rows.

It was suggested in the instructions that a trial site be chosen which had a uniform crop history and where the soil was well drained. A soil analysis was recommended for determination of pH, organic matter, phosphorus, and potassium. It was recommended that an application of 25 kg/ha N, 25 kg/ha P, and 25 kg/ha K be broadcast and worked into the plot prior to planting.

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Sufficient seed was provided to overplant approximately 50%. It was recommended that the plants be thinned soon after emergence to a stand of one plant per 5cm.

The method of weed control suggested was mechanical or chemical, according to the facilities available to the cooperator. Chemicals were suggested for use in control of insects.

CULTIVARS

Cultivars entered in the Sixth ISVEX during 1978 were selected for various criteria, including agronomic performance, maturity group classification, seed availability, uniform seed quality, and adaptability to program design. The majority of the entries were selected from U. S. Department of Agriculture Regional Soybean variety trials. Cultivars that demonstrated consistent high yields were then selected for introduction into the ISVEX trials. There are 36 cultivars entered in the Sixth ISVEX (Tables 1 and 3). Sixteen of these cultivars were retained from the Fifth ISVEX in order to conduct a more complete evaluation and interpretation of their performance. There were 19 recently developed soybean cultivars suitable for inclusion in the Sixth ISVEX. The pedigrees of these soybean cultivars can be found in Table 1.

The cultivars were divided into three groups according to their relative maturity and were distributed among cooperators according to the environmental zone of the site. Later maturing cultivars were distributed in tropical zones while earlier maturing cultivars were dispatched to more temperate areas. These three groups were designated ISVEX A (tropical), ISVEX B (sub-tropical), and ISVEX C (temperate). The variety Williams was common to all three sets (see Table 2).

In the instructions for the ISVEX trials, it was suggested that the cooperator might substitute one or two local soybean cultivars for those which were supplied by INTSOY. Many cooperators did substitute and the data on the performance of these cultivars can be observed in the table showing the analysis of data for the particular location.

EXPERIMENT SITES

The experiment sites were divided into environmental zones which were defined according to latitude and altitude. Separating the trial sites by latitude permitted evaluation of cultivars under similar conditions of day length. Separation according to altitude permitted evaluation under similar conditions of day and night-time temperatures. There was some variation within each zone in temperature, moisture, and solar radiation. Limits of each of the 13 zones and the number of sites in each zone are shown in Table 4.

The environmental zones were defined by each 10° increment in latitude from the equator and according to three altitude ranges: 0-500m, 501-1000m, and over 1000m.

The environment dictated the optimum planting date for each site. Plantings were made throughout the year with the earliest planting date being February 15, 1978, and the last planting date being March 23, 1979.

The Sixth ISVEX was dispatched to 185 sites in 76 countries. Data were returned from 107 sites which had a coefficient of variation for yield less than or equal to 30.0%. Of these 107 sites, 39 were in Africa, 18 in Asia, 29 in South America and 21 in Europe, Mesoamerica, Middle East, North America and Oceania. Figure 1 shows the locations of countries where trials were completed. The cultivars were evaluated under a wide range of environmental conditions which are represented by sites which range in latitude from 40° 7 minutes North in Urbana, Illinois, U. S. A., to 34° 35 minutes South at Buenos Aires, Argentina, and by a range in elevation from 2m at Papara, Tahiti, to 1860m at Kathmandu, Nepal. Useful data, meaning the coefficient of variation for yield was less than or equal to 30.0%, were returned from 22 trials located between 20° North and 20° South latitudes and below 500m altitude (Table 5).

DATA COLLECTED

Data were reported for each plot by cooperators as follows:

Yield: Weight in grams of clean, dry grain from 5m of the two center rows which is a harvest area of 6m².

Days to flower: Days from date of emergence to date when 50% of the plants had flowered.

Days to maturity: Days from date of emergence to date when 95% of the pods were ripe.

Nodule number: Number of nodules on roots of ten plants at the time when the first flowers appeared and a second count of nodules three weeks after first flowering.

Nodule weight: Weight of nodules on roots of ten plants at the time when the first flowers appeared and again three weeks after first flowering.

Plant height at maturity: Height in centimeters from the ground surface to the top of the main stem at maturity.

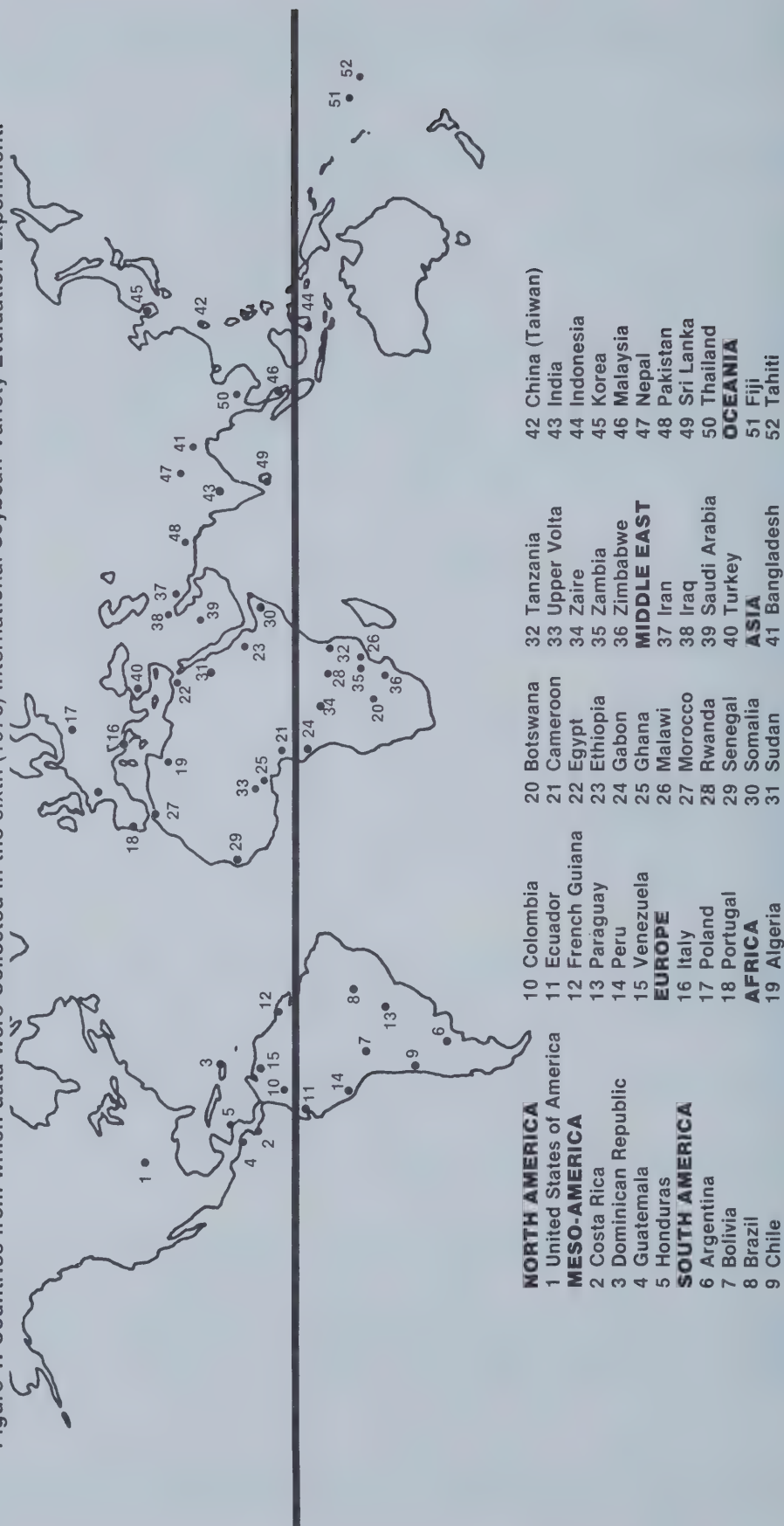
Lodging score: Estimated rating of lodged or down plants on a scale of 1 (all erect) to 5 (all down) as observed at time of maturity.

Shattering score: Estimated rating of the amount of shattering of seed from the pods on a scale of 1 (no seed shattered) to 5 (over 50% shattered) at the time of maturity.

Plants harvested: Total number of plants harvested.

Pods per plant: Mean number of pods per plant estimated from ten plants.

Figure 1. Countries from which data were collected in the sixth (1978) International Soybean Variety Evaluation Experiment.



Seed weight: Weight in grams of 100 randomly selected seeds from the dried, cleaned grain.

Quality of seed: Estimated rating of seed quality after harvest considering the amount of wrinkling, defective seed coats, off-color seeds and moldy or rotten seed according to a scale of 1 (very good quality) to 5 (very poor quality).

Data were also compiled for protein and oil contents of harvested beans. These analyses were made from one seed sample of each cultivar which was composited across replications at each trial site by the cooperator who returned the sample to INTSOY for analysis. Protein and oil contents were determined on the dry weight basis by a near-infrared light reflectance instrument in the Department of Agronomy at the University of Illinois.

STATISTICAL ANALYSIS OF DATA

Analysis of variance was completed for variables for which data were complete at each site during the same season. Means, standard error of a cultivar mean, coefficient of variation, and the least significant difference (LSD) of cultivar means at the 5% level are reported for analyzable variables from each experiment site. Correlation coefficients were computed between agronomic characteristics.

Oil and protein analysis data are reported for each cultivar but no analysis of variance was performed.

A combined analysis was prepared for those environmental zones which contained at least four sites for which the coefficient of variation of yield was less than or equal to 30.0% (Tables 7 and 8). In the case of Environmental Zone X, two analyses are presented because there were two groups of cultivars.

RESULTS AND DISCUSSIONS - ISVEX SITES

Summary mean values for parameters observed in experiments during 1978 are presented for environmental zones in Tables 7 through 28. The data in these tables have been rearranged in Tables 29 through 34 to bring the data on several characteristics of each variety together so that it is easier to compare the performance of a variety with others. In Table 29 are given observed values usually at more than one location. Even with the observed values, it is difficult to make comparisons because the observed value is determined not only by the genotype of the cultivar but also by the environment. For example, the average yield level at the locations varied widely because conditions for growth were not the same. To partially remove the effect of environment, the mean of a group of varieties that were in several trials was calculated for each location. The "percent of the means" values were calculated as follows:

$$\frac{\text{Observed value}}{\text{Mean of check varieties}} \times 100 = \text{"percent of the mean"}$$

In Table 30 are given the "percent of the mean" values for the later maturing varieties based on the mean performance of Bossier, Improved Pelican and Williams. In Table 31 are given the "percent of the mean" values for the earlier maturing varieties based on the mean performance of Williams, Mitchell and Calland.

Yield

The range yield, 1320 kg/ha to 3035 kg/ha, indicated that soybean yields range from moderately low to relatively high when compared to those in the temperate zone. Within varieties there was a large variation in relative performance between zones. For a given location, variety recommendations should be based on the results of local trials.

Days to Flowering and Days to Maturity

The indicators of the development of a variety, the number of days from emergence to flowering and the number of days from emergence to maturity, are more stable than yield. In Tables 32 and 33 are given the data on flowering and maturity from 3 zones for each of 9 varieties. In Table 32 are given the data from the lower latitudes ($0-10^{\circ}59'$) and in Table 33 ($21^{\circ}-41^{\circ}-59'$) the number of days from flowering to maturity is given rather than from emergence to maturity because "days to flowering" is included in "days from emergence to maturity". Analysis of covariance of the data is shown in each table.

The period from planting until flowering and from flowering to maturity was significantly correlated in both early ($r=+.72$) and late ($r=+.63$) maturing varieties. The early flowering varieties tended to have a shorter period between flowering and maturity among the early maturing varieties ($r=+.987^{***}$) than among the late maturing varieties ($r=-.25^{ns}$). In Zone III flowering was delayed (56.3 days) due to high altitude ($<1000'$) but the period from flowering to maturity (63.3 days) was intermediate between the other two zones.

Plant Height

A classification of soybean varieties based on height can be made from the data presented in Tables 30 and 31. While the relative height of a variety varies from one zone to another, it does tend to be consistent.

Number of Pods Per Plant

Relative number of pods per plant (Tables 30 and 31) proved to be a rather stable characteristic for most varieties. Taller varieties tended to have more pods but within varieties there did not appear to be a relationship between height and number of pods.

Weight per Seed

Weight per 100 seed varied from 12 to 21 grams. There was considerable variation in the relative standings within a variety between zones but

such varieties as Improved Pelican, SJ-2, Orba, and Forrest can definitely be classified as small-seeded and Tunia, Jupiter, Williams and Cutler 71 can be classified as large-seeded.

Quality of Seed

The quality of seed produced in the trials was not good. On a scale of 1 to 5 (excellent to very poor) the very lowest rating was 1.6 for a variety-zone combination. Many varieties were rated over 3 at two or more locations. The small-seeded varieties tended to be rated lower --- in other words, they tended to have higher quality seeds.

Protein and Oil

The percent protein and oil of the samples received are presented in Tables 25 and 34. The relative levels of several varieties in different zones are given in Table 34. Bossier, Improved Pelican and Williams are the check varieties. The range in both characteristics was not great. The lowest percent protein was 39.8 and the highest 46.4. The lowest percent oil was 16.5 and the highest 22.7. The relative levels shown in Table 34 show that Caribe was high in protein and low in oil, whereas, Ransom was low in protein and high in oil. Jupiter was somewhat low in both protein and oil. Soybeans produced in the trials generally were satisfactory from the standpoint of protein and oil.

SUMMARY

A large number of soybean cultivars with a diverse genetic composition were evaluated by cooperators under a wide range of environmental conditions in the Sixth International Soybean Variety Evaluation Experiment. Thirty-six cultivars from maturity groups 0-IX, including 16 different cultivars from previous ISVEX trials, were divided into early, medium and late maturing trials. The cultivars provided a source of the latest improved germplasm to 185 sites in 76 countries.

Table 1. *Pedigree of soybean cultivars grown in the Sixth International Soybean Variety Evaluation Experiment (ISVEX) during 1978*

Cultivar	Maturity Group	Pedigree
Altona	00	P.I. 194654 x Flambeau
Bossier	VII	Selection from Lee
Bragg	VII	Jackson x D49-2491
Calland	III	(Blackhawk x Harosoy) x Kent
Caribe	IX or later	Unknown, Colombia
CH-3	IX or later	Unknown
Cobb	VIII	F57-735 x D58-3358
Columbus	IV	C1069 x Clark
Corsoy	II	Harosoy x Capital
Crawford	IV	Williams x Columbus
Cutler 71	IV	Cutler ⁴ x Kent
Davis	VI	[Roanoke x (Ogden x CNS)] x (Ralsoy x Ogden)
Elf	III	(Williams x Ransom)
Evans	0	Merit x Harosoy
Franklin	IV	L 12 x Custer
Forrest	V	Dyer x Bragg
Gasoy 17	VII	Bragg x Hood
Harcor	II	Corsoy x (Corsoy x Harosoy 63)
Hardee LS	VIII	D49-772 x Improved Pelican
Hodgson	I	Corsoy x M372
IAC-2	IX or later	La 49-1219 x Yelmand1
Improved Pelican	VIII	Tanloxi x P.I. 60406
James	IV	Delmar x Kent
Jupiter	IX	D49-2491 x P.I. 240664
Kahala	V	(Bunsei x UD 288) x Bunsei
Mitchell	IV	Privately developed variety
Orba		Unknown, Indonesia
Ransom	VII	(N55-5931 x N55-3818) x D56-1185
Rillito	VI	Clark x D49-2491
SJ-2	VII	Unknown
Steele	I	Blackhawk x Harosoy
Swift	0	[(Lincoln ² x Richland) x Korean] x (Renville x Capital)
Tunia	>IX	Colombia
UFV-1	>IX	D49-2491 x Improved Pelican Viçoja selection
Union	IV	Williams x S1 11
Williams	III	Wayne x L57-0034

Table 2: Distribution of cultivars in the Sixth ISVEX during 1978

Cultivars	Distribution by environmental zone		
	A I, II & IV	B III, V, VI, VII VIII, IX, & X	C XI, XII, & XIII
Altona			X
Bossier	X		
Bragg		X	
Calland		X	
Caribe	X		
CH-3	X		
Cobb		X	
Columbus			X
Corsoy			X
Crawford			X
Cutler 71		X	
Davis	X		
Elf			X
Evans			X
Franklin		X	
Forrest		X	
Gasoy 17		X	
Harcor			X
Hardee LS	X		
Hodgson			X
IAC-2	X		
Improved Pelican	X		
James		X	
Jupiter	X		
Kahala	X		
Mitchell		X	
Orba	X		
Ransom	X		
Rillito	X		
SJ-2	X		
Steele			X
Swift			X
Tunia	X		
UFV-1	X		
Union			X
Williams	X		

Table 3: List of soybean varieties in the Sixth International Soybean Variety Evaluation Experiment conducted during 1978

Code No.	A-Late Maturity (Tropical) I, II & IV	B-Medium Maturity (Sub-Tropical) III, V, VI, VII VIII, IX, X	C-Early Maturity (Temperate) XI, XII, XIII
01	CH-3		
02	UFV-1		
03	SJ-2		
04	Hardee LS		
05	Orba		
06	IAC-2		
07	Tunia		
08	Caribe		
09	Jupiter		
10	Improved Pelican	Improved Pelican	
11	Kahala	Kahala	
12	Rillito	Rillito	
13	Bossier	Bossier	
15	Ransom	Ransom	
19	Davis	Davis	
14	Williams	Williams	Williams
16		Cobb	
17		James	
18		Forrest	
20		Gasoy 17	
21		Calland	Calland
22		Franklin	Franklin
23		Cutler 71	Cutler 71
24		Mitchell	Mitchell
25		Bragg	
26			Altona
27			Swift
28			Steele
29			Harcor
30			Hodgson
31			Elf
32			Columbus
33			Union
34			Corsoy
35			Crawford
36			Evans

Table 4: Description of environmental zones in the Sixth International Soybean Variety Evaluation Experiment conducted during 1978

Zone	Latitude	Elevation (m)	Number of Sites
I	$<10^{\circ}59'$ <u>1/</u>	<500	21
II	$<10^{\circ}59'$	501-1,000	8
III	$<10^{\circ}59'$	$>1,000$ <u>2/</u>	9
IV	$11^{\circ}-20^{\circ}59'$	<500	10
V	$11^{\circ}-20^{\circ}59'$	501-1,000	4
VI	$11^{\circ}-20^{\circ}59'$	$>1,000$	7
VII	$21^{\circ}-30^{\circ}59'$	<500	13
VIII	$21^{\circ}-30^{\circ}59'$	501-1,000	5
IX	$21^{\circ}-30^{\circ}59'$	$>1,000$	1
X	$31^{\circ}-40^{\circ}59'$	<500	24
XI	$31^{\circ}-40^{\circ}59'$	501-1,000	3
XII	$31^{\circ}-40^{\circ}59'$	$>1,000$	2
XIII	$\geq 41^{\circ}$	≥ 0	

1/ $<$ = less than

2/ $>$ = greater than

Table 5: Geographical description of sites where the Sixth International Soybean Variety Evaluation Experiment was conducted and from which useful data were returned to INTSOY

Region	Country	Site	Latitude	Elevation (m)
Africa	Algeria	Ahmer-el-Ain	36°38'N	56
		Khemis-Miliana	36°15'N	296
	Botswana	Mahalapye	23° 7'S	1000
		Sebele	24°34'S	994
	Cameroon	Dschang	5°27'N	1450
		Foumbot	5°31'N	1100
		Santchou	5° N	700
	Egypt	Bahteem	30°28'N	24
		Sakha	31° N	
		Seds	29° N	48
		Shebin El-Kom	32° N	
	Ethiopia	Awassa	6°25'N	1700
		Debre-Zeit	9° N	1860
	Gabon	Ntoun	0°20'N	
	Ghana	Kumasi	6°41'N	270
		Kumasi	6°42'N	270
	Malawi	Chitipa	9°46'S	1266
		Chitala	13°30'S	600
		Lilongwe	13°59'S	3725
	Morocco	Berkane	34°56'N	145
		Gharb	34°30'N	85
		Tadla	32° N	445
	Rwanda	Karama	2°16'S	1350
		Rubona	2°29'S	1650
	Senegal	Centre IAO/OMOS	16°30'N	10
	Somalia	Afgoi	2° 9'N	50
	Sudan	Abu-Naama	12°44'N	0
		Halima	7° N	450
		Kadugli	11° N	
		Wad Medani	14°24'N	400
	Tanzania	Morogoro	5°80'S	525
		Zanzibar	6° S	30
	Upper Volta	Vallee du Kou	11°40'N	450
	Zaire	Kamina	7° S	1000
		Mwebe	5° S	550
	Zambia	Lusaka	15°24'S	1154
		Mufulira	12°38'S	1243
		Magoye	16° 1'S	1067
Asia	Zimbabwe	Salisbury	17°48'S	1506
	Bangladesh	Joydebpur	24° N	8
		Mymensingh	24° 7'N	18
	Taiwan	Shanhua	23° 7'N	9
	India	Hissar	29°10'N	215
	Indonesia	Bogor	6°30'S	270
		Medan	3°32'N	27
		Soropadan		500

Table 5 (Cont'd.): Geographical description of sites where the Sixth International Soybean Variety Evaluation Experiment was conducted and from which useful data were returned to INTSOY

Region	Country	Site	Latitude	Elevation (m)	
Asia (cont'd.)	Korea	Suweon	37°17'N	37	
	Malaysia	Sarawak	1°10'N	30	
	Nepal	Birgunj	27° 2'N	100	
		Kathmandu	27°40'N	1860	
	Pakistan	Islamabad	33° N	550	
		Lahore	31°30'N	230	
		Lahore	31°30'N	230	
		Lahore	31°19'N	225	
		Tandojam	25° 2'N	19	
	Sri Lanka	Maha Illuppallama	8° N	138	
	Thailand	Srisamrong	17°12'N	56	
	Europe	Italy	Rome	42° 2'N	42
			Cagliari	39°25'N	89
Poland		Radzikow	52°13'N	90	
Portugal		Vinha Brava-Azores	38°41'N	160	
		S. Miguel-Azores	37°45'N	80	
		San Miguel-Azores	37°45'N	80	
		Vinha Brava	38°40'N	160	
Meso-America		Costa Rica	Taboga	10° N	8
	Dominican Republic	San Jose de Ocoa	18°40'N	1000	
	Guatemala	Chimaltenango	14°39'N	1800	
	Honduras	Garuma 2	15°22'N	36	
Middle East	Iran	Gorgan	36°51'N	120	
		Sari	36°41'N	28	
	Iraq	Abu-Ghraib	35° 3'N	30	
		Rashida	36°19'N	223	
	Saudi Arabia	Unayzah, Gassim	26° 4'N	724	
		Unayzah	26° 4'N	724	
	Turkey	Adana	37°19'N	90	
	North America	United States of America	Urbana, Illinois	40° 7'N	226
Naiselesele			16°40'S	50	
Oceania	Fiji	Papara	17°30'S	2	
South America	Argentina	Buenos Aires	34°35'S	255	
		Cerro Azul	27°39'S	283	
		Pergamino	34° S	65	
	Bolivia	Abapo Izozog	18°39'S	389	
		Santa Cruz	17°14'S	320	
		Yacuiba	21°57'S	600	
		Brazil	Cruz Alta	28°38'S	473
	Dourados		28°38'S	345	
	Jaiba		14° 5'S	520	
	Chile		Santiago	33°42'S	654
		Santiago de Chile	33°34'S	625	
	Colombia	Cordoba	8°50'N	13	
		Palmira	3°32'N	1080	

Table 5 (Cont'd.) Geographical description of sites where the Sixth International Soybean Variety Evaluation Experiment was conducted and from which useful data were returned to INTSOY

Region	Country	Site	Latitude	Elevation (m)
South America (cont'd.)	Ecuador	Boliche	2°15'S	14
		Pallatanga	1°59'S	1270
		E. E. Portoviejo	1° 4'S	25
		Pichilingue	1° 6'S	73
	French Guiana	Cayenne	4°54'N	7
	Paraguay	Caacupe	25°24'S	228
	Peru	El Porvenir	6°31'S	262
		El Porvenir	6°31'S	262
		Huancayo	11°54'S	650
		Huarangopampa-Bagua	5°40'S	500
		La Molina	12° 5'S	251
		Sullana	4°51'S	80
		Tingo Maria	9°45'S	610
		Tingo Maria	9°18'S	661
	Venezuela	Barinas	8°37'N	180

Table 6: List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
AFRICA	Algeria	113, 115 Data	Mr. Tayeb Ferhat Benabbad	Station Regional I.D.C.I. Khemis-Miliana El-Asnam, ALGERIA
		174, 175 Data 171, 176 No Data	Dr. D. E. Gollifer G. S. Maphanyane	Agricultural Research Station P. O. Box 0033 Gaborone, BOTSWANA
	Botswana			
	Burundi	1, 3, 5 No Data	Mr. J. Dewez	ISABU B. P. 795 Bujumbura, BURUNDI
	Cameroon	32, 33 Data 34	Mr. J. Praquin	IRAF B. P. 44 Dschang, CAMEROON
		69 No Data	Ing. Ivetic Obrad	Expert de la FAO B. P. 3, Lekana Brazzaville, CONGO
	Congo			
Egypt		111 Data 112 No Data	Dr. M. N. Shatla	Professor of Plant Pathology Menoufeia University Shebin El-Kom, EGYPT
		105, 129 Data 126	Dr. Ali Abdel-Aziz and Dr. Samia Ali Mahmoud	Grain Legume Research Station Field Crops Research Institute Agricultural Research Center Giza, Cairo, EGYPT
		109 No Data	Mr. M. Monir	Plant Production Department Desert Institute Mataria, Cairo, EGYPT
Ethiopia		130 Data	Dr. Alemu Mengistu	Agricultural Experiment Station B. P. Box 32 Debre-Zeit, ETHIOPIA

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
AFRICA (cont'd)	Ethiopia (cont'd)	117	Mr. Gasahun Woldie	AWASSA Research Station P. O. Box 6 Sidamo, ETHIOPIA
		130B, 117B	Dr. Zmedu Waeku	General Manager Agricultural Research Institute Ministry of Agriculture P. O. Box 2003 Addis Ababa, ETHIOPIA
	Gabon	19	Mr. J. Van Amerongen Mr. G. Van de Plas	Project CLAM UNDP BP 2183 Libreville, GABON
		80	Mr. Yves Aracelin	UNDP Ecole Nationale de Cadres Ruraux Oyem, Woleu N'tem Province, GABON
Ivory Coast	Ghana	23	Mr. Yaw Baafo Nimoh	Grains Development Board P. O. Box 4000 Kumasi, GHANA
		8	Mr. Hector Mercer-Quarshie	Crops Research Institute P. O. Box 3785 Kumasi, GHANA
	Ivory Coast	63, 55 60	Mr. A. D. Assa	Universite National de Cote d'Ivoire Faculte des Sciences B. P. 4322 Abidjan, IVORY COAST
		183	Dr. E. T. Mahatanya	Head of Dryland Research Agricultural Research Station P. O. Box MS 24 Maseru 100, LESOTHO

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
AFRICA (cont'd)	Malagasy Republic	37	Mr. R. Rasolofo	Directeur de la Division de Pathologie Vegetale B. P. 1444 - Ambatobe, Tananarive, MALAGASY REPUBLIC
	Malawi	79, 152 163	Mr. P. K. Sibale and Mr. D. J. Khonje	Chitedze Research Station P. O. Box 158 Lilongwe, MALAWI
	Morocco	211 212	Dr. Mohamed Abdouh Yacoubi and Mr. M. Aberouh	Institut Agronomique B. P. Box 704 Agdal-Rabat, MOROCCO
		216	Dr. Driss Nadah	Agronomist, Office Regional de Mise En Valeur Agricole de Tadla Fquih Ben Salah, MOROCCO
	Niger	67, 51	No Data	Director, C.N.R.A. Tarna P. O. Box 240 Maradi, NIGER
	Rwanda	161	Mr. Ndamage Georges	Legume Program I.S.A.R. - Karama B. P. 121 Kigali, RWANDA
		172	Mr. Pierre Nyabyenda	I.S.A.R.- Rubona B. P. 138 Butare, RWANDA
		75, 78	No Data	Project Director Cooperation Technique Allemande B. P. 70 Nyabisindu, RWANDA

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
AFRICA (cont'd)	Senegal	62	Dr. Ing. Toader Moscal	Project "Development de la cerealiculture" B. P. 256 Saint-Louis, SENEGAL
		57, 59	No Data	FAO-OMVS B. P. 154 Dakar, SENEGAL
	Somalia	42	Mr. Giumale Ossoble Salad and Mr. Faduma H. Mohamud	Central Agricultural Research Institute Ministry of Agriculture Mogadishu, SOMALIA
		49	Mr. David Hopkinson	Agronomist, Soil and Crop Investigation Project P. O. Box 913 Khartoum, SUDAN
Tanzania	Sudan	12	Dr. M. O. M. Salih and Dr. O. A. A. Ageeb	Agricultural Research Cooper- ation, Ministry of Agriculture P. O. Box 126 Wad Medani, SUDAN
		24	Mr. Fathi Mohamad Khalifa	Abu-Naama Research Station Abu-Naama RNP SUDAN
	Tanzania	165	Dr. Omer E. Simsaa	Agricultural Research Corp. Kadugli Research Station Kadugli, SUDAN
		14	Dr. K. W. May	P. O. Box 643 Morogoro, TANZANIA

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
AFRICA (cont'd)	Tanzania (cont'd)	14	Mr. M. E. T. Mmbaga	Agricultural Research and Training Institute Ilonga Private Bag Kilosa, TANZANIA
		2	Mr. A. J. Carpenter	UNDP/FAO/URT/73/024 Ministry of Agriculture and Land P. O. Box 159 Zanzibar, TANZANIA
	Tunisia	106, 110	No Data	c/o Director of INRAT Route de la Soukra Ariana, TUNISIA
	Uganda	6	No Data	Department of Crop Science Makerere University P. O. Box 7062 Kampala, UGANDA
Upper Volta		64	Data	C.E.R.C.I. UPV/75/035 B. P. 130 Bobo-Dioulasso, UPPER VOLTA
		64		C.E.R.C.I. Farako-BA B. P. 540 Bobo-Dioulasso, UPPER VOLTA
Zaire		157	Data	Mission Methodiste B. P. 10 Kabongo, Shaba, ZAIRE

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
AFRICA (cont'd)	Zaire (cont'd)	18	Mr. Thomas G. Hart	CIMMYT Team Leader Programme National Mais Station de Kisanga B. P. 3673 Lubumbashi, ZAIRE
		68	Mr. Edward Charles	SEDA Service Du Developpement Agricole B. P. 1 Tshikapa, ZAIRE
		180, 181 182	Mr. F. Javaheri, Mr. G. Melhuish and Dr. C. Nissly	Copperbelt Research Station P. O. Box 11 Magoye, ZAMBIA
	Zimbabwe	178	Dr. J. R. Tattersfield and Mr. J. S. Tichagwa	Crop Breeding Institute P. B. Box 8100 Causeway Salisbury, ZIMBABWE
ASIA	Afghanistan	131, 132	No Data	President of Research Ministry of Agriculture Kabul, AFGHANISTAN
	Bangladesh	150	Mr. A. Sobhan and Mr. M. Z. Hoque	c/o IRRI P. O. Box 64 Ramna, Dacca-2, BANGLADESH
		141	Dr. A. J. Miah, Mr. Jafax Ahmed, Mr. B. H. Sikder	Plant Breeding Division P. O. Box 4 INA Mymensingh, BANGLADESH

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

Region	Country	Trial Number	Name	Address
ASIA (cont'd)	Bangladesh (cont'd)	162	Mr. Peter R. Hobbs	IRRI Bungalow No. 4 Farmgate, Telyoon Dacca, BANGLADESH
	Burma	144	Dr. Myint Thein	General Manager Applied Research Division Agricultural Cooperation Rangoon, BURMA
	Taiwan	170	Dr. S. Sharmugasundaram	Soybean Coordinator The Asian Vegetable Research and Development Center P. O. Box 42, Shanhua, Tainan, 741 TAIWAN
	India	136	Dr. B. D. Chaudhary	Department of Plant Breeding Haryana Agricultural University Hissar . 125 004 INDIA
		48	Mr. T. K. Venkataraman	Agricultural Experimental Institute Kudumiamalai Vayalagam Post 622104 Pudukkottai Dist. Tamilnadu, INDIA
		140	Mr. M. D. Tedia	c/o Director of Agriculture Directorate of Agriculture Bhopal, Madhya Pradesh, INDIA
Indonesia		20	Ir. Soenjoto Djojodirdjo	Department of Agronomy University of Gadjah Mada Yogyakarta, INDONESIA

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
ASIA (cont'd)	Indonesia (cont'd)	36	Ir. Baringin O. P. Tampubolon	Department Agronomy Fakultas Pertanian USU Medan, INDONESIA
		7	Mr. A. Dimiyati and Mr. Darman M. Arsyad	Central Research Institute for Agriculture Jalan Merdeka 99 Bogor, INDONESIA
	Korea	209	Mr. Keun Young Park	Crop Experiment Station Suweon 170, KOREA
	Malaysia	25	Mr. MacPherson Chia	Agricultural Research Center Semongok P. O. Box 977, Kuching Sarawak, MALAYSIA
		53	Dr. Chew Soo Ton	Korporasi Pembaugunan Desa SEDCO Complex Block D, Lot 14 Kota Kinabalu, Sabah, MALAYSIA
Nepal		139	Mr. R. P. Sah and Mr. B. R. Pandey	Parwanipur Agr. Station Birgunj, NEPAL
		138	Mr. M. P. Bharati and Mr. S. I. Jaiswal	Department of Agriculture Khumaltare, GPO 404 Kathmandu, NEPAL
		135, 145	Mr. Jens von Bargaen	Gandaki Agricultural Development Project P. O. Box Z Pokhara, NEPAL

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
ASIA (cont'd)	Pakistan	118	Mr. A. H. Chaudhry, Mr. M. A. Jaleel and Mr. N. Ahmeel	Agricultural Research Institute Tandojam, PAKISTAN
		142	Dr. Abdur Rahman Khan	Coordinator (Oilseed) AI-Markaz F - 7/2 Pakistan Agri. Res. Council Islamabad, PAKISTAN
		143, 147	Dr. Baz Mohammad Khan	Agricultural Research Council P. O. Box 1031 Islamabad, PAKISTAN
		146, 201, 217	Mr. J. R. Lockman and Mr. Robert Troedson	Technical Services Assoc. Agricultural Project 23-2 Race Course Road Lahore 3, PAKISTAN
	Philippines	114B	Mr. S. Bodshah	Agricultural Research Institute Tarnab, N. W.F.P. PAKISTAN
		44	Mr. F. B. Ballon	B. P. I. San Andres, Manila, PHILIPPINES
		76	Mr. C. Bartolome	Institute of Plant Breeding Legume Division U. P. at Los Banos College, Laguna 3720, PHILIPPINES
		41	Mr. Benjamin Legaspi	BPI Economic Gardens Los Banos, Laguna, PHILIPPINES

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
ASIA (cont'd)	Sri Lanka	173, 311	Dr. H. E. Herath	Sri Lanka Soybean Project Central Agricultural Research Institute Peradeniya, Gannoruwa, SRI LANKA
	Thailand	43	Dr. Arwooth NaLampang	Dept. of Agriculture Bangkhen, Bangkok 9 THAILAND
	Vietnam	--	Dr. Vo-Tong Xuan	University of Cantho Cantho, Hau-Giang SOCIALIST REPUBLIC OF VIETNAM
EUROPE	Czechoslovakia	206	Ing. Teodor Simsky	Vyskumny Ustav Rastlinnej Vyroby Bratislavská Cesta 2696 921 68 Piestany, CZECHOSLOVAKIA
	France	207, 210	Mr. Claude Planchon	Laboratoire d'Amelioration des Plantes Ecole Nationale Supérieure Agronomique 31076 Toulouse - Cedex FRANCE
	Italy	203	Mr. Mauro Deidda	CRAS Via Alberti, 22 09100 Cagliari, Sardinia, ITALY

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
EUROPE (cont'd)	Italy (cont'd)	204	Mr. G. Porreca	Comitato Nazionale Per L'Energia Nucleare Casella Postale 24000 00100 Rome, ITALY
	Netherlands	249	Mr. J. A. Leemans	Unilever Research Agricultural Dept. P. O. Box 7 Zevenaar, HOLLAND
	Poland	250	Director	Soybean Laboratory Plant Breeding and Acclimatization Institute Radzikow, 05-870 Blonie, POLAND
	Portugal	202	Mr. Abilio Dos Santos O. Silva	Instituto Nacional De Investiga- gacao Agraria Rua Das Janelas Verdes - 92 Lisbon, PORTUGAL
		103, 104, 101	Mr. J. Hermano do Brum Sousa Dourado	Servicos Agricolas de S. Miguel Quinta de S. Goncalo 9500 Ponta Delgada Azores, PORTUGAL
		102	Mr. L. Tadeu S. Dutra	Servicos Agricolas da Ilha Terceira, Vinha Brava Angra, 9700 Codex, PORTUGAL

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
MESO-AMERICA	Costa Rica	52	Mr. Rodrigo Alfaro M. and Mr. Adrian Morales G.	Min. Agric. Ganaderia Apdo Postal 3718 San Jose, COSTA RICA
	Dominican Republic	29	Mr. C. C. Schwitzke	c/o Embajada Alemana AP 1235 Santo Domingo, DOMINICAN REPUBLIC
	Guatemala	119	Mr. Darryl Jordan	PLENTY c/o Canadian Embassy Edificio Maya Guatemala City, GUATEMALA
	Honduras	72	Mr. Julio Romero	SIATSA Division of Tropical Research La Lima, HONDURAS
St. Vincent	St. Vincent	50, 59	Dr. Franklin E. Rosales	Programa Nacional de Investigacion Agropecuaria Secretaria de Recursos Naturales Tegucigalpa D. C., HONDURAS
		71, 73, 81, 82, 169	Mr. Jethro Greene	Organization for Rural Development P. O. Box 933, Kingstown, St. Vincent, WEST INDIES
		54	Dr. A. A. John Conje	Virgin Islands Agricultural Experiment P. O. Box 920, Kingshell, St. Croix, VIRGIN ISLANDS 00850
MID-EAST	Iran	123, 127	Mr. H. H. Pourdavai, Mr. H. Ghaffari, Mr. L. L. Vulic	c/o H. Pourdavai Seed and Plant Improvement Institute Karaj, IRAN

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
MID-EAST (cont'd)	Iran (cont'd)	107	Mr. M. C. Amirshahi	College of Agriculture Karaj, IRAN
		205	Dr. J. Carapetian	University of Rezaiyeh P. O. Box 32 Rezaiyeh, IRAN
	Iraq	133, 134	Mr. Ridha S. Marouf and Mr. S. D. Sulaman	Oilseed Section Nineva Research Station Dept. of Field Crop Abu-Sharaib, Baghdad, IRAQ
		116	Dr. N. M. Elsahookie	Dept. of Field Crops College of Agriculture Abu-Ghraib, IRAQ
	Israel	208	Dr. Baruch Retig	The Volcani Center P. O. Box 6 Bet Dagan, ISRAEL
	Jordan	120, 122	Mr. Z. S. Ghoseh	Director of Agronomy Division Agr. Res. and Ext. Dept. P. O. Box 226 Amman, JORDAN
	Saudi Arabia	124	Manager	CATM P. O. Box 81 Unayzah, Gassim, SAUDI ARABIA

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
MID-EAST (cont'd)	Saudi Arabia (cont'd)	159	Mr. M. Z. Jowana	Director, Crop Production Div. Dept. of Agric. Res. and Dev. Ministry of Agr. and Water Riyadh, SAUDI ARABIA
		164	Eng. Abdul Razzaq Al-Hassan	Diriaa, Ar-Raqqa, SYRIA
	Syria	173	Eng. Ahmad Kabalan	Minister of Agr. and Agr. Reform Damascus, SYRIA
		121	Mr. G. C. Hawtin	Food Legume Improvement Program ICARDA Box 5466 Aleppo, SYRIA
		125, 128	Mr. Mohamed Sadek El Matt	Institute of Agricultural Research Douma, Damascus, SYRIA
		218	Dr. Ibrahim Atakisi and Mr. H. Halis Arioglu	C. U. Ziraat Fakultesi Tarla Bitkileri Yetistirme Ve Islahi Bolumu, Adana, TURKEY
	Turkey	219	Mr. Ken Dolezal	CARE PK 6 Yenisehir, Ankara, TURKEY
		14	Mr. Henry Hill	INTSOY, Dept. of Agronomy, University of Illinois 1102 South Goodwin Avenue Urbana, Illinois 61801, U. S. A.
NORTH AMERICA	U. S. A.			

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
OCEANIA	Fiji	99	Mr. R. Viner and Mr. M. Prasad	Legalega Research Station P. O. Box 9086 Nadi Airport, FIJI
	New Caledonia	77	Mr. Robert Arrighi	C.R.E.A. B. P. 37 Bourail, NEW CALEDONIA
	Tahiti	11	Mr. Jean-Louis Reboul and Mr. Robert Yau	B. P. 494 Papeete, TAHITI
	Tonga	179	Mr. Haniteli Ofa Faamunu	Research Director, Research Division, Ministry of Agriculture Box 14 Nukualofa, TONGA
SOUTH AMERICA	Argentina	225	Ms. Nora Mancuso	Instituto Nacional de Tecnología Agropecuaria Rivadavia 1439 1033 Capital Federal Buenos Aires, ARGENTINA
		220	Ing. Carlos Remussi	Catedra de Cultivos Industriales Facultad de Agronomía Universidad de Buenos Aires Avda. San Martín 4453 Buenos Aires, ARGENTINA

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
SOUTH AMERICA (cont'd)	Argentina (cont'd)	162	Mr. Wilhelm Reupke	Instituto Nacional de Tecno- logia Agropecuaria Av. Corrientes 320, Casilla de Cor. 152, 330 Posadas Misiones, ARGENTINA
		226	Ing. Agr. Nestor Padulles	CC No. 21-2580 Marcos Juarez (CBA) ARGENTINA
	Bolivia	155	Mr. Juan Bellott Montalvo	Proyecto Abapo-Izozog Est Exp. "Armando Gomez" Cajon Postal 1281 Santa Cruz do la Sierra, BOLIVIA
		153	Mr. R. Delgadillo	Estacion Experimental "Gran Chaco" Casilla #49 Yacuiba, Tarija, BOLIVIA
		167	Ing. Hebert Zurita O., Mr. D. K. Kidman, and Mr. A. Tejerina	Enc. Loeaginosas y Fibrotextiles Estacion Experimental Casilla 247 Santa Cruz, BOLIVIA
	Brazil	154	Mr. Carmine Rosita and Mr. L. P. Bonetti	Fecotrigo Research Dept. Caixa Postal 10 Cruz Alta - RS BRAZIL

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

Region	Country	Trial Number	Name	Address
SOUTH AMERICA (cont'd)	Brazil (cont'd)	61	Mr. Jack Schultz and Mr. R. Richardson	Sementes JMS Ltda. Caixa Postal 659 79.800 Dourados Mata Grosso, BRAZIL
		108	Mr. Chris Suebert and Mr. Mervyn Olson	EPAMIG Caixa Postal 12 Janauba, Minas Gerais CEP 39.440, BRAZIL
	Chile	221	Dr. P. C. Parodi and Ms. I. M. Nebreda	Universidad Catolica de Chile Casilla 114-D Santiago, CHILE
		224	Mr. Vital Valdivia B.	Estacion Experimental La Platina Instituto de Investigaciones Agropecuarias Casilla 5427 Santiago, CHILE
Colombia		16, 17 15	Dr. Gilberto Bastidas R. Mr. R. Varela Mr. L. A. Roja M. Mr. M. A. Munoz	ICA Centro Experimental Palmira Apartado Aereo 233 Palmira, Valle, COLOMBIA
	Ecuador	94, 21, 39, 38	Mr. E. Maldonado	INIAP Apartado. No. 7069 Guayaquil, ECUADOR
French Guiana		31	Mr. R. Vanbercie	IRAT Station de Cabassou B. P. 60, Cayenne, 97301 FRENCH GUIANA

Table 6 (cont'd): List of cooperators participating in the Sixth International Soybean Variety Evaluation Experiment

<u>Region</u>	<u>Country</u>	<u>Trial Number</u>	<u>Name</u>	<u>Address</u>
SOUTH AMERICA (cont'd)	Guyana	35	Mr. Herman Adams	Central Agricultural Station Ministry of Agriculture Mon Repos, East Coast, Demerara, GUYANA
	Paraguay	158	Ing. Roberto Casaccia, Mr. Oscar Aguilera, and	c/o Ministerio de Agricultura y Ganaderia Instituto Agronomico Nacional Caacupe, PARAGUAY
	Peru	40, 148, Data 149, 47, 46, 213	Dr. Luis Camacho, Ing. M. Guerreo Renteria, Mr. T. R. Perez Lazo, Mr. Jose Bruno A., Ing. Pedro L. Cubillas, Ing. Ubaldo C. A. Maceda, Mr. Eduardo S. Vilcapoma, Mr. Ramon Rios R.	Avenida Salaverry 674 Oficina 802 Lima, PERU
		215	Mr. Carlos Alberto Loayza	Estacion Experimental-Huancayo Calle Real #507 El tambo, Huancayo, PERU
		10, 70	Ing. Armando Cueva- Benavides, Ing. Dairo Maldonado, Mr. Luis Lopez	Experimental Station "El Porvenir" Apartado 9 Tarapoto, PERU
	Surinam	45	Mr. E. Rellum-Venvhurt	Agricultural Experiment Station P. O. Box 160 Paramaribo, SURINAM
	Venezuela	4	Dr. Luis Mariano C. and Mr. Roberto Niño	Edificio Cavendis Av. Francisco de Miranda Apartado 224 Caracas, VENEZUELA

Table 7: Yield of soybean grain in kilograms per hectare observed in the Sixth ISVEX conducted in similar environmental zones (I, II, III and IV)

Cultivar	Mean grain yield (kg/ha)			
	13 sites	6 sites	5 sites	6 sites
	Zone I 0-10° lat. 0-500m	Zone II 0-10° lat. 501-1000m	Zone III 0-10° lat. >1000m	Zone IV 11-20° lat. 0-500m
Tunia	2109 (1) ^{1/}			2573 (1)
Jupiter	2032 (2)		2585 (3)	2210 (5)
Hardee LS	2025 (3)		2884 (1)	2219 (4)
UFV-1	1997 (4)		2275 (7)	2223 (3)
Rillito	1975 (5)	1320 (5)		
Bossier	1961 (6)	1641 (2)	2225 (9)	2526 (2)
Imp. Pelican	1860 (7)	1723 (1)	2620 (2)	2179 (6)
Williams	1853 (8)	1588 (3)	1946 (10)	2024 (8)
SJ-2	1849 (9)		2497 (4)	1778 (11)
IAC-2	1836 (10)		2252 (8)	2052 (7)
CH-3	1812 (11)		2356 (5)	
Caribe	1755 (12)			1825 (10)
Orba	1671 (13)	1506 (4)	2287 (6)	1996 (9)
Cobb	^{2/}			
Mean	1903 ^{3/}	1556	2393	2146
LSD (0.05)	-NS-	-NS-	-NS-	-NS-

^{1/} Numbers in parentheses indicate ranking of mean yields

^{2/} Cultivar omitted at some sites, therefore, mean values not calculated

^{3/} Differences not significant at 5% level

Table 8: Yield of soybean grain in kilograms per hectare of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X Group A and X Group B)

Cultivars	Mean grain yield (kg/ha)			
	5 sites	8 sites	6 sites	7 sites
	Zone VI	Zone VII	Zone X	Zone X
	11-20 ⁰ lat. >1000m	21-30 ⁰ lat. 0-500m	31-40 ⁰ lat. 0-500m	31-40 ⁰ lat. 0-500m
Forrest	3035 (1) ^{1/}	1504 (12)	2140 (8)	
Davis	2935 (2)	2119 (3)	2093 (9)	
Bossier	2798 (3)	1982 (6)	2141 (7)	
Ransom	2791 (4)	2151 (2)	2357 (3)	
Gasoy 17	2683 (5)	2015 (5)		
Mitchell	2617 (6)	1831 (7)	2623 (1)	2314 (6)
Crawford	2593			2283 (8)
James	2470 (8)			
Cutler 71	2433 (9)	1579 (9)	2147 (6)	
Calland	2262 (10)	1661 (8)	2513 (2)	2404 (2)
Williams	2158 (11)	1560 (11)	2321 (4)	2292 (7)
Imp. Pelican	2124 (12)	2058 (4)		
Franklin	2010 (13)	1567 (10)	2269 (5)	2360 (4)
Rillito	^{2/}	2474 (1)	1888 (10)	
Elf				2480 (1)
Columbus				2363 (3)
Union				2322 (5)
Harcor				2168 (9)
Hodgson				2033 (10)
Evans				2027 (11)
Steele				1804 (12)
Swift				1589 (13)
Altona				1324 (14)
Mean	2531	1875	2249	2126
LSD (0.05)	405	497	-NS- ^{3/}	535

^{1/} Numbers in parentheses indicate ranking of mean yields

^{2/} Cultivar omitted at some sites, therefore, mean values not calculated

^{3/} Differences not significant at 5% level

Table 9: Days from emergence to first flowering of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (I, II, III and IV)

Cultivar	Mean days to flower			
	13 sites	6 sites	5 sites	6 sites
	Zone I	Zone II	Zone III	Zone IV
	0-10° lat. 0-500m	0-10° lat. 501-1000m	0-10° lat. >1000m	11-20° lat. 0-500m
Tunia	32			39
Jupiter	42		65	46
Hardee LS	40		65	48
UFV-1	35		54	41
Rillito	30	38		
Bossier	35	42	53	38
Imp. Pelican	35	42	57	40
Williams	29	37	44	31
SJ-2	36		56	43
IAC-2	35		54	43
CH-3	35		54	
Caribe	36			43
Orba	34		59	41
Cobb		38		
Mean	35	40	56	41
LSD (0.05)	1.9	1.6	5.8	4.9

Table 10: Days from emergence to maturity of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (I, II, III and IV)

Cultivar	Mean days to maturity			
	12 sites	6 sites	5 sites	6 sites
	Zone I	Zone II	Zone III	Zone IV
	0-10° lat. 0-500m	0-10° lat. 501-1000m	0-10° lat. >1000m	11-20° lat. 0-500m
Tunia	105			106
Jupiter	109		133	111
Hardee LS	114		133	111
UFV-1	103		122	104
Rillito	93	92		
Bossier	100	101	110	94
Imp. Pelican	99	96	118	100
Williams	90	92	101	89
SJ-2	104		122	97
IAC-2	106		123	106
CH-3	109		127	
Caribe	117			115
Orba	95		115	95
Cobb		102		
Mean	103	97	120	103
LSD (0.05)	5.4	4.4	6.5	10.3

Table 11: Height in centimeters of cultivars observed in the
Sixth ISVEX conducted in similar environmental zones
(I, II, III and IV)

Cultivar	Mean plant height (cm)			
	13 sites	6 sites	5 sites	6 sites
	Zone I	Zone II	Zone III	Zone IV
	0-10° lat. 0-500m	0-10° lat. 501-1000m	0-10° lat. >1000m	11-20° lat. 0-500m
Tunia	53			58
Jupiter	61		72	61
Hardee LS	54		60	51
UFV-1	36		35	37
Rillito	48	42		
Bossier	50	49	43	47
Imp. Pelican	66	53	61	67
Williams	46	43	35	41
SJ-2	62		62	58
IAC-2	64		63	70
CH-3	74		76	
Caribe	73			72
Orba	60		68	68
Cobb		37		
Mean	58	45	58	57
LSD (0.05)	6.4	8.9	8.9	10.8

Table 12: Amount of lodging of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (I, II, III and IV)

Cultivar	Mean lodging score ^{1/}			
	13 sites Zone I 0-10 ⁰ lat. 0-500m	5 sites Zone II 0-10 ⁰ lat. 501-1000m	3 sites Zone III 0-10 ⁰ lat. >1000m	6 sites Zone IV 11-20 ⁰ lat. 0-500m
Tunia	1.4			1.3
Jupiter	1.9		2.3	1.6
Hardee LS	1.4		2.2	1.3
UFV-1	1.0		1.1	1.1
Rillito	1.5	1.3		
Bossier	1.4	1.4	1.7	1.7
Imp. Pelican	1.8	1.4	1.9	2.0
Williams	1.3	1.4	1.3	1.3
SJ-2	2.0		2.6	1.3
IAC-2	1.7		2.6	2.4
CH-3	2.1		2.8	
Caribe	2.0			2.3
Orba	2.3		3.0	2.3
Cobb		1.3		
Mean	1.7	1.4	2.2	1.7
LSD (0.05)	.49	-NS-	-NS-	.81

^{1/}

Mean of lodging scores where:

- 1 = all plants erect
- 2 = all leaning slightly or a few down
- 3 = all leaning moderately (45⁰) or 25-30% down
- 4 = all leaning considerably or 50-80% down
- 5 = all plants down

Table 13: Amount of shattered pods of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (I, II, III and IV)

Cultivars	Mean shattering score ^{1/}			
	13 sites	5 sites	3 sites	6 sites
	Zone I	Zone II	Zone III	Zone IV
	0-10° lat. 0-500m	0-10° lat. 501-1000m	0-10° lat. >1000m	11-20° lat. 0-500m
Tunia	1.2			1.5
Jupiter	1.0		1.0	1.1
Hardee LS	1.1		1.0	1.1
UFV-1	1.2		1.0	1.1
Rillito	1.0	1.3		
Bossier	1.0	1.3	1.0	1.2
Imp. Pelican	1.1	1.3	1.0	1.5
Williams	1.0	1.5	1.0	1.4
SJ-2	1.5		1.0	1.4
IAC-2	1.2		1.0	1.3
CH-3	1.2		1.0	
Caribe	1.5			1.0
Orba	2.1		2.2	1.9
Cobb		1.5		
Mean	1.2	1.4	1.1	1.3
LSD (0.05)	.41	-NS-	-NS-	.46

^{1/} Mean of shattering scores where:

- 1 = no shattered pods
- 2 = 1-10% shattered pods
- 3 = 10-25% shattered pods
- 4 = 25-50% shattered pods
- 5 = over 50% shattered pods

Table 14: Number of pods per plant of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (I, II, III and IV)

Cultivar	Mean number of pods per plant			
	13 sites	6 sites	5 sites	6 sites
	Zone I	Zone II	Zone III	Zone IV
	0-10° lat. 0-500m	0-10° lat. 501-1000m	0-10° lat. >1000m	11-20° lat. 0-500m
Tunia	36			45
Jupiter	36		32	47
Hardee LS	48		43	53
UFV-1	28		32	39
Rillito	36	19		
Bossier	30	17	25	39
Imp. Pelican	33	21	32	41
Williams	22	15	18	28
SJ-2	40		36	66
IAC-2	37		31	53
CH-3	36		34	
Caribe	46			58
Orba	34		31	44
Cobb		15		
Mean	36	18	31	47
LSD (0.05)	7.4	4.2	7.6	17.9

Table 15: Weight of 100 seeds in grams of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (I, II, III and IV)

Cultivar	Mean seed weight (g/100 seeds)			
	13 sites	6 sites	4 sites	5 sites
	Zone I	Zone II	Zone III	Zone IV
	0-10° lat. 0-500m	0-10° lat. 501-1000m	0-10° lat. >1000m	11-20° lat. 0-500m
Tunia	19			17
Jupiter	19		20	15
Hardee LS	17		17	14
UFV-1	17		19	15
Rillito	16	16		
Bossier	17	16	16	16
Imp. Pelican	15	14	16	13
Williams	19	20	21	17
SJ-2	15		14	13
IAC-2	17		19	15
CH-3	16		15	
Caribe	14			12
Orba	14		15	13
Cobb		18		
Mean	16	17	17	14
LSD (0.05)	1.4	1.3	3.3	1.8

Table 16: Quality of harvested seed of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (I, II, III and IV)

Cultivars	Mean seed quality score ^{1/}			
	12 sites	6 sites	4 sites	4 sites
	Zone I	Zone II	Zone III	Zone IV
	0-10 ^o lat. 0-500m	0-10 ^o lat. 501-1000m	0-10 ^o lat. >1000m	11-20 ^o lat. 0-500m
Tunia	2.7			2.3
Jupiter	2.6		2.9	1.9
Hardee LS	2.4		2.0	2.2
UFV-1	2.4		2.2	1.9
Rillito	2.3	2.8		
Bossier	2.5	2.4	2.1	1.8
Imp. Pelican	2.1	2.0	1.6	1.9
Williams	2.1	2.4	2.3	2.0
SJ-2	2.1		1.9	2.3
IAC-2	2.3		2.5	1.9
CH-3	2.6		2.4	
Caribe	2.8			2.0
Orba	2.2		2.1	1.9
Cobb		2.6		
Mean	2.4	2.4	2.2	2.0
LSD (0.05)	.44	-NS-	-NS-	-NS-

^{1/} Mean of seed quality scores where:

- 1 = very good
- 2 = good
- 3 = fair
- 4 = poor
- 5 = very poor

Table 17: Days from emergence to first flowering of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X Group A, X Group B)

Cultivar	Mean days to flower			
	5 sites	8 sites	6 sites	6 sites
	Zone VI	Zone VII	Zone X	Zone X
	11-20 ^o lat. >1000m	21-30 ^o lat. 0-500m	Group A 31-40 ^o lat. 0-500m	Group B 31-40 ^o lat. 0-500m
Forrest	37	45	66	
Davis	43	51	77	
Bossier	45	50	80	
Ransom	34	44	74	
Gasoy 17	33	47		
Mitchell	29	32	49	39
Crawford	30			31
James	31			
Cutler 71	30	31	41	
Calland	28	29	40	36
Williams	28	30	42	37
Imp. Pelican	51	68		
Franklin	28	30	40	39
Rillito		46	76	
Elf				38
Columbus				40
Union				38
Harcor				33
Hodgson				32
Evans				38
Steele				30
Swift				30
Altona				28
Mean	34	42	58	35
LSD (0.05)	5.1	8.4	7.9	4.0

Table 18: Days from emergence to maturity of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X Group A and X Group B)

Cultivars	Mean days to maturity			
	4 sites	8 sites	6 sites	6 sites
	Zone VI	Zone VII	Zone X	Zone X
	11-20 ^o lat. >1000m	21-30 ^o lat. 0-500m	Group A 31-40 ^o lat. 0-500m	Group B 31-40 ^o lat. 0-500m
Forrest	108	123	156	
Davis	112	131	176	
Bossier	115	139	180	
Ransom	105	132	179	
Gasoy 17	102	135		
Mitchell	96	106	142	115
Crawford	98			90
James	100			
Cutler 71	96	101	138	
Calland	100	102	134	107
Williams	93	101	143	104
Imp. Pelican	120	139		
Franklin	93	102	132	115
Rillito		128	174	
Elf				108
Columbus				120
Union				110
Harcor				95
Hodgson				87
Evans				107
Steele				86
Swift				86
Altona				76
Mean	103	120	155	101
LSD (0.05)	8.9	11.3	15.4	11.7

Table 19: Height in centimeters of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X GROUP A and X Group B)

Cultivar	Mean plant height (cm)			
	5 sites	8 sites	5 sites	7 sites
	Zone VI	Zone VII	Zone X	Zone X
	11-20 ⁰ lat. >1000m	21-30 ⁰ lat. 0-500m	Group A 31-40 ⁰ lat. 0-500m	Group B 31-40 ⁰ lat. 0-500m
Forrest	53	51	94	
Davis	55	60	104	
Bossier	60	69	105	
Ransom	38	50	98	
Gasoy 17	38	58		
Mitchell	49	58	94	76
Crawford	50			61
James	47			
Cutler 71	49	53	93	
Calland	43	55	95	76
Williams	39	50	84	67
Imp. Pelican	82	109		
Franklin	42	54	95	77
Rillito		80	113	
Elf				45
Columbus				79
Union				77
Harcor				64
Hodgson				57
Evans				70
Steele				59
Swift				57
Altona				51
Mean	49	62	98	65
LSD (0.05)	13.4	11.8	14.4	9.6

Table 20: Amount of lodging of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X Group A, X Group B)

Cultivars	Mean lodging score ^{1/}			
	4 sites	8 sites	4 sites	5 sites
	Zone VI	Zone VII	Zone X	Zone X
	11-20 ⁰ >1000m	21-30 ⁰ lat. 0-500m	Group A 31-40 ⁰ lat. 0-500m	Group B 31-40 ⁰ lat. 0-500m
Forrest	1.4	1.1	1.9	
Davis	1.5	1.3	2.0	
Bossier	2.6	1.5	2.8	
Ransom	1.1	1.1	2.3	
Gasoy 17	1.1	1.3		
Mitchell	1.3	1.2	2.0	1.6
Crawford	1.1			1.5
James	1.3			
Cutler 71	1.1	1.2	2.1	
Calland	1.3	1.1	1.9	1.5
Williams	1.0	1.1	1.2	1.4
Imp. Pelican	2.7	2.4		
Franklin	1.0	1.1	1.8	1.5
Rillito		1.7	2.7	
Elf				1.0
Columbus				1.6
Union				1.4
Harcor				1.7
Hodgson				1.6
Evans				1.6
Steele				1.6
Swift				1.8
Altona				1.8
Mean	1.4	1.3	2.1	1.5
LSD (0.05)	.96	.48	-NS-	-NS-

^{1/} Mean of lodging scores where:

- 1 = all plants erect
- 2 = all leaning slightly or a few down
- 3 = all leaning moderately (45⁰) or 25-30% down
- 4 = all leaning considerably or 50-80% down
- 5 = all plants down

Table 21: Amount of shattered pods of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X Group A, X Group B)

Cultivars	Mean shattering score ^{1/}			
	2 sites	7 sites	4 sites	5 sites
	Zone VI 11-20 ⁰ lat. >1000 m	Zone VII 21-30 ⁰ lat. 0-500m	Zone X Group A 31-40 ⁰ lat. 0-500m	Zone X Group B 31-40 ⁰ lat. 0-500m
Forrest	1.0	1.0	1.3	
Davis	1.1	1.2	1.4	
Bossier	1.1	1.3	1.6	
Ransom	1.0	1.0	1.4	
Gasoy 17	1.1	1.1		
Mitchell	1.0	1.2	1.4	1.5
Crawford	1.0			1.3
James	1.3			
Cutler 71	1.0	1.2	1.4	
Calland	1.4	1.2	1.6	1.3
Williams	1.0	1.3	1.3	1.2
Imp. Pelican	1.5	1.3		
Franklin	1.0	1.2	1.6	1.3
Rillito		1.0	1.4	
Elf				1.4
Columbus				1.2
Union				1.2
Harcor				1.5
Hodgson				1.4
Evans				1.4
Steele				1.4
Swift				1.7
Altona				2.1
Mean	1.1	1.2	1.5	1.4
LSD (0.05)	-NS-	-NS-	-NS-	-NS-

^{1/}

Mean of shattering scores where:

- 1 = no shattered pods
- 2 = 1-10% shattered pods
- 3 = 10-25% shattered pods
- 4 = 25-50% shattered pods
- 5 = over 50% shattered pods

Table 22: Number of pods per plant of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X Group A, X Group B)

Cultivars	Mean number of pods per plant			
	5 sites Zone VI	7 sites Zone VII	5 sites Zone X Group A	7 sites Zone X Group B
	11-20 ^o lat. >1000m	21-30 ^o lat. 0-500m	31-40 ^o lat. 0-500m	31-40 ^o lat. 0-500m
Forrest	27	38	30	
Davis	25	39	30	
Bossier	25	48	39	
Ransom	20	34	27	
Gasoy 17	20	48		
Mitchell	20	32	36	30
Crawford	22			28
James	16			
Cutler 71	18	27	31	
Calland	15	28	26	23
Williams	15	26	23	22
Imp. Pelican	31	58		
Franklin	28	26	26	26
Rillito		53	32	
Elf				25
Columbus				28
Union				23
Harcor				29
Hodgson				26
Evans				28
Steele				23
Swift				23
Altona				21
Mean	22	38	30	25
LSD (0.05)	-NS-	10.1	-NS-	4.7

Table 23: Weight of 100 seeds in grams of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X Group A and X Group B)

Cultivars	Mean seed weight (g/100 seeds)			
	5 sites Zone VI	7 sites Zone VII	4 sites Zone X Group A	6 sites Zone X Group B
	11-20 ⁰ lat. >1000m	21-30 ⁰ lat. 0-500m	31-40 ⁰ lat. 0-500m	31-40 ⁰ lat. 0-500m
Forrest	17	15	16	
Davis	19	17	16	
Bossier	18	16	17	
Ransom	20	18	18	
Gasoy 17	19	17		
Mitchell	19	17	18	15
Crawford	20			14
James	20			
Cutler 71	21	17	17	
Calland	21	17	17	16
Williams	20	16	17	17
Imp. Pelican	15	13		
Franklin	19	16	17	16
Rillito		15	14	
Elf				16
Columbus				16
Union				17
Harcor				14
Hodgson				15
Evans				14
Steele				16
Swift				13
Altona				
Mean	19	16	17	15
LSD (0.05)	1.3	1.8	-NS-	1.9

Table 24: Quality of harvested seed of cultivars observed in the Sixth ISVEX conducted in similar environmental zones (VI, VII, X Group A and X Group B)

Cultivars	Mean seed quality score ^{1/}			
	5 sites Zone VI	7 sites Zone VII	5 sites Zone X Group A	3 sites Zone X Group B
	11-20 ⁰ lat. >1000m	21-30 ⁰ lat. 0-500m	31-40 ⁰ lat. 0-500m	31-40 ⁰ lat. 0-500m
Forrest	3.0	3.0	2.9	
Davis	2.3	2.0	2.5	
Bossier	2.7	2.4	1.8	
Ransom	2.8	2.1	2.6	
Gasoy 17	2.2	2.5		
Mitchell	2.6	3.0	3.5	3.5
Crawford	2.3			3.3
James	2.2			
Cutler 71	2.7	2.6	3.8	
Calland	2.8	3.1	3.7	3.7
Williams	2.7	2.4	2.6	3.6
Imp. Pelican	2.9	1.8		
Franklin	2.8	2.7	3.7	3.7
Rillito		2.1	2.4	
Elf				3.8
Columbus				2.8
Union				3.8
Harcor				3.9
Hodgson				3.7
Evans				3.9
Steele				3.7
Swift				4.3
Altona				4.2
Mean	2.6	2.5	2.9	3.7
LSD (0.05)	-NS-	-NS-	1.2	-NS-

^{1/} Mean of seed quality scores where:
 1 = very good
 2 = good
 3 = fair
 4 = poor
 5 = very poor

Table 25: Percent protein and oil in cultivars observed in the Sixth ISVEX conducted in environmental zones (I, II, and III)

Cultivar	Mean protein and oil content (%)											
	10 sites Zone I 0-10° lat. 0-500m		5 sites Zone II 0-10° lat. 501-1000m		3 sites Zone III 0-10° lat. >1000m							
	Protein	Oil	Protein	Oil	Protein	Oil						
Caribe	46.4	(2.0) ^{1/}	17.9	(1.7)	---	---	45.0	(2.9)	18.6	(0.4)		
UFV-1	44.1	(2.1)	20.8	(1.6)	---	---	43.3	(4.0)	20.4	(1.8)		
Bossier	44.0	(2.3)	21.5	(2.3)	43.5	(1.5)	16.5	(7.6)	43.2	(2.6)	20.7	(2.1)
CH-3	43.9	(2.0)	20.4	(0.9)	---	---	---	---	42.8	(2.6)	19.6	(0.8)
Imp. Pelican	43.8	(2.7)	21.5	(2.0)	44.2	(1.9)	19.4	(2.1)	42.8	(3.4)	20.9	(1.4)
IAC-2	43.8	(2.2)	21.7	(1.6)	---	---	---	---	43.5	(1.5)	21.0	(1.3)
Williams	43.7	(1.2)	21.5	(2.0)	43.2	(1.2)	21.0	(1.9)	41.9	(2.9)	21.7	(0.9)
Tunia	43.6	(2.2)	21.0	(1.7)	---	---	---	---	40.3	(3.6)	22.2	(2.2)
SJ-2	43.2	(2.8)	20.1	(2.4)	---	---	---	---	43.4	(2.2)	20.0	(1.7)
Jupiter	43.1	(3.0)	20.1	(3.2)	---	---	---	---	41.2	(2.8)	21.0	(2.0)
Hardee LS	42.5	(3.0)	22.3	(2.3)	---	---	---	---	42.1	(2.4)	20.6	(0.6)
Orba	42.0	(2.6)	20.2	(1.8)	---	---	---	---	39.8	(3.5)	18.4	(1.4)
Rillito	40.9	(6.7)	21.4	(2.6)	42.9	(1.6)	21.5	(1.8)	---	---	---	---
Ransom	---	---	---	---	42.4	(1.8)	22.9	(3.0)	43.0	(1.5)	22.8	(2.3)
Cobb	---	---	---	---	42.0	(3.3)	20.9	(2.5)	41.5	(2.5)	21.0	(0.8)
Gasoy 17	---	---	---	---	41.7	(1.6)	20.3	(1.4)	---	---	---	---
Mean	43.5	20.8	42.8	20.4	42.4	20.6						

^{1/} Standard deviation

Table 26: Percent protein and oil in cultivars observed in the Sixth ISVEX conducted in environmental zones (IV and V)

Cultivar	Mean protein and oil content (%)			
	6 sites Zone IV 11°-20° lat. 0-500m		3 sites Zone V 11°-20° lat. 501-1000m	
	Protein	Oil	Protein	Oil
Bossier	45.1	(1.5) 1/ 20.3	---	---
Imp. Pelican	44.9	(1.6) (1.8)	45.9	(1.3) (1.1)
Ransom	44.1	(1.3) (1.6) (1.7)	---	---
Williams	43.9	(1.2) (2.6)	44.7	(1.1) (0.9)
Rillito	43.5	(2.0) (1.7)	---	---
Cobb	42.2	(1.4) (2.0)	---	---
Crawford	---	---	45.3	(1.1) 21.2 (1.8)
Calland	---	---	44.9	(0.3) 21.0 (0.7)
Cutler 71	---	---	44.9	(0.7) 21.6 (2.0)
Mitchell	---	---	43.3	(0.5) 21.8 (1.8)
Franklin	---	---	43.0	(1.5) 21.1 (1.5)
Mean	44.0	21.6	44.6	21.4

1/Standard deviation

Table 27: Percent protein and oil in cultivars observed in the Sixth ISVEX conducted in environmental zones (VI, VII, and VIII)

Cultivar	Mean protein and oil content (%)					
	6 sites Zone VI 11°-20° lat. >1000m		5 sites Zone VII 21°-30° lat. 0-500m		3 sites Zone VIII 21°-30° lat. 501-1000m	
	Protein	Oil	Protein	Oil	Protein	Oil
Bossier	---	---	---	---	42.6 (1.1)	19.6 (0.8)
Bossier	---	---	---	---	42.6 (1.1)	19.3 (0.3)
Bragg	---	---	---	---	42.3 (1.1)	18.3 (4.1)
Gasoy 17	41.9 (1.5) ^{1/}	18.6 (1.3)	---	---	42.0 (1.0)	19.9 (0.8)
Cutler	43.7 (1.0)	19.3 (1.5)	42.2 (1.5)	21.7 (0.7)	41.8 (1.2)	22.2 (1.8)
Ransom	---	---	42.7 (1.7)	22.6 (1.2)	41.7 (0.9)	22.3 (0.7)
Davis	43.1 (1.0)	19.1 (1.4)	42.6 (1.8)	20.8 (1.3)	41.6 (0.4)	19.7 (1.7)
Rillito	---	---	43.8 (1.6)	20.4 (1.5)	41.4 (1.1)	21.0 (0.4)
Calland	---	---	42.2 (1.5)	20.5 (0.9)	41.3 (0.8)	20.5 (1.2)
Forrest	41.9 (1.7)	18.5 (2.1)	42.4 (1.2)	20.1 (1.8)	40.7 (0.8)	20.4 (1.2)
James	43.4 (1.8)	19.9 (1.9)	---	---	40.3 (0.4)	22.3 (0.8)
Franklin	---	---	41.4 (1.8)	22.1 (1.1)	40.0 (2.8)	22.6 (0.6)
Mitchell	---	---	41.2 (2.0)	22.0 (1.5)	39.6 (1.0)	21.3 (3.3)
Williams	---	---	42.6 (1.4)	21.9 (1.3)	---	---
Imp. Pelican	44.8 (1.1)	17.8 (2.5)	---	---	---	---
Mean	43.1	18.9	42.3	21.3	41.4	20.7

^{1/} Standard deviation

Table 28: Percent protein and oil in cultivars observed in the Sixth ISVEX conducted in environmental zone X (Group A and Group B)

Cultivar	Mean protein and oil content (%)			
	8 sites Zone X _O 31°-40° lat. 0-500m Group A		8 sites Zone X _O 31°-40° lat. 0-500m Group B	
	Protein	Oil	Protein	Oil
Altona	42.5	<u>1/</u> (1.6)	---	---
Union	42.5	(1.3)	---	---
Williams	42.1	(1.1)	43.9	(1.8)
Elf	41.8	(1.6)	---	---
Steele	41.5	(1.5)	---	---
Harcor	41.5	(3.1)	42.0	(3.4)
Hodgson	40.8	(2.5)	---	---
Mitchell	40.7	(2.2)	---	---
Franklin	40.3	(2.1)	42.0	(1.9)
Bossier	---	---	43.8	(2.4)
Rillito	---	---	43.7	(2.0)
Cutler	---	---	43.1	(2.0)
Ransom	---	---	42.6	(3.2)
Calland	---	---	42.4	(2.0)
Gasoy 17	---	---	42.2	(2.8)
Forrest	---	---	41.4	(3.6)
Mean	41.5	21.9	42.7	19.8

1/ Standard deviation

Table 29. Characteristics of soybean varieties grown from February 15, 1978 to March 23, 1979 in one or more environmental zones

Variety	Zone	Yield, kg/ha	Flowering, days after emergence	Maturity, days after emergence	Height, cm.	Lodging, score $\bar{1}/$	Shattered pods, $\bar{1}/$ score	Pods per plant	Seed weight, g/100	Quality of seed, $\bar{1}/$ score	% Protein, seed	% Oil, seed
Tunia	I	2109	32	105	53	1.4	1.2	36	19	2.7	43.6	21.0
	IV	2573	39	106	58	1.3	1.5	45	17	2.3	-	-
Jupiter	I	2032	42	109	61	1.9	1.0	36	19	2.6	43.1	20.1
	III	2585	65	133	72	2.3	1.0	32	20	2.9	41.2	21.0
	IV	2210	46	111	61	1.6	1.1	47	15	1.9	-	-
Hardee LS	I	2025	40	114	54	1.4	1.1	48	17	2.4	42.5	22.3
	III	2884	65	133	60	2.2	1.0	43	17	2.0	42.1	20.6
	IV	2219	48	111	51	1.3	1.1	53	14	2.2	-	-
UFV-1	I	1997	35	103	36	1.0	1.2	28	17	2.4	44.1	20.8
	III	2275	54	122	35	1.1	1.0	32	19	2.2	43.3	20.4
	IV	2223	41	104	37	1.1	1.1	39	15	1.9	-	-
Rillito	I	1975	30	93	48	1.5	1.0	36	16	2.3	40.9	21.4
	II	1320	38	92	42	1.3	1.3	19	16	2.8	42.9	21.5
	VII	2474	46	128	80	1.7	1.0	53	15	2.1	43.8	20.4
	X-A	1888	76	174	113	2.7	1.4	32	14	2.4	-	-
Bossier	I	1961	35	100	50	1.4	1.0	30	17	2.5	44.0	21.5
	II	1641	42	101	49	1.4	1.3	17	16	2.4	43.5	16.5
	III	2225	53	110	43	1.7	1.0	25	16	2.1	43.2	20.7
	IV	2526	38	94	47	1.7	1.2	39	16	1.8	45.1	20.3
	VI	2798	45	115	60	2.6	1.1	25	18	2.7	-	-
	VII	1982	50	139	69	1.5	1.3	48	16	2.4	-	-
	X-A	2141	80	180	105	2.8	1.6	39	17	1.8	-	-

Table 29 (continued). Characteristics of soybean varieties grown from February 15, 1978 to March 23, 1979 in one or more environmental zones

Variety	Zone	Yield, kg/ha	Flowering, days after emergence	Maturity, days after emergence	Height, cm.	Lodging, score $\frac{1}{10}$	Shattered pods, $\frac{1}{10}$ score	Pods per plant	Seed weight, g/100	Quality of seed, $\frac{1}{10}$ score	% Protein, seed	% Oil, seed
Davis	VI	2935	43	112	55	1.5	1.1	25	19	2.3	43.1	19.1
	VII	2119	51	131	60	1.3	1.2	39	17	2.0	42.6	20.8
	X-A	2093	77	176	104	2.0	1.4	30	16	2.5	-	-
Ransom	VI	2791	34	105	38	1.1	1.0	20	20	2.8	-	-
	VII	2151	44	132	50	1.1	1.0	34	18	2.1	42.7	22.6
	X-A	2357	74	179	98	2.3	1.4	27	18	2.6	-	-
Gasoy 17	VI	2683	33	102	38	1.1	1.1	20	19	2.2	41.9	18.6
	VII	2015	47	135	58	1.3	1.1	48	17	2.5	-	-
Mitchell	VI	2617	29	96	49	1.3	1.0	20	19	2.6	-	-
	VII	1831	32	106	58	1.2	1.2	32	17	3.0	41.2	22.0
	X-A	2623	49	142	94	2.0	1.4	36	18	3.5	40.7	21.8
	X-B	2314	39	115	76	1.6	1.5	30	15	3.5	-	-
Crawford	VI	2593	30	98	50	1.1	1.0	22	20	2.3	45.3	21.2
	X-B	2283	31	90	61	1.5	1.3	28	14	3.3	42.0	19.3
James	VI	2470	31	100	47	1.3	1.3	16	20	2.2	43.4	19.9
Cutler 71	VI	2433	30	96	49	1.1	1.0	18	21	2.7	43.7	19.3
	VII	1579	31	101	53	1.2	1.2	27	17	2.6	42.2	21.7
	X-A	2147	41	138	93	2.1	1.4	31	17	3.8	-	-
Calland	VI	2262	28	100	43	1.3	1.4	15	21	2.8	-	-

Table 29 (continued). Characteristics of soybean varieties grown from February 15, 1978 to March 23, 1979 in one or more environmental zones

Imp. Pelican	I	1860	35	99	66	1.8	1.1	33	15	2.1	43.8	21.5
	II	1723	42	96	53	1.4	1.3	21	14	2.0	44.2	19.4
	III	2620	57	118	61	1.9	1.0	32	16	1.6	42.8	20.9
	IV	2179	40	100	67	2.0	1.5	41	13	1.9	45.1	20.3
	VI	2124	51	120	82	2.7	1.5	31	15	2.9	44.8	17.8
	VII	2058	68	139	109	2.4	1.3	58	13	1.8	-	-
Williams	I	1853	29	90	46	1.3	1.0	22	19	2.1	43.7	21.5
	II	1588	37	92	43	1.4	1.5	15	20	2.4	43.2	21.0
	III	1946	44	101	35	1.3	1.0	18	21	2.3	41.9	21.7
	IV	2024	31	89	41	1.3	1.4	28	17	2.0	43.9	21.7
	VI	2158	28	93	39	1.0	1.0	15	20	2.7	-	-
	VII	1560	30	101	50	1.1	1.3	26	16	2.4	42.6	21.9
	X-A	2321	42	143	84	1.2	1.3	23	17	2.6	42.1	22.7
	X-B	2292	37	104	67	1.4	1.2	22	17	3.6	43.9	19.9
SJ-2	I	1849	36	104	62	2.0	1.5	40	15	2.1	43.2	20.1
	III	2497	56	122	62	2.6	1.0	36	14	1.9	43.4	20.0
	IV	1778	43	97	58	1.3	1.4	66	13	2.3	-	-
IAC-2	I	1836	35	106	64	1.7	1.2	37	17	2.3	43.8	21.7
	III	2252	54	123	63	2.6	1.0	31	19	2.5	43.5	21.0
	IV	2052	43	106	70	2.4	1.3	53	15	1.9	-	-
CH3	I	1812	35	109	74	2.1	1.2	36	16	2.6	43.9	20.4
	III	2356	54	127	76	2.8	1.0	34	15	2.4	42.8	19.6
Caribe	I	1755	36	117	73	2.0	1.5	46	14	2.8	46.4	17.9
	IV	1825	43	115	72	2.3	1.0	58	12	2.0	-	-
Orba	I	1671	34	95	60	2.3	2.1	34	14	2.2	42.0	20.2
	III	2287	59	115	68	3.0	2.2	31	15	2.1	39.8	18.4
	IV	1996	41	95	68	2.3	1.9	44	13	1.9	-	-
Forrest	VI	3035	37	108	53	1.4	1.0	27	17	3.0	41.9	18.5
	VII	1504	45	123	51	1.1	1.0	38	15	3.0	42.4	20.1
	X-A	2140	66	156	94	1.9	1.3	30	16	2.9	-	-

Table 29 (continued). Characteristics of soybean varieties grown from February 15, 1978 to March 23, 1979 in one or more environmental zones

Calland	VII X-A X-B	1661 2513 2404	29 40 36	102 134 107	55 95 76	1.1 1.9 1.5	1.2 1.6 1.3	28 26 23	17 17 16	3.1 3.7 3.7	42.2 - 42.4	20.5 - 19.1
Franklin	VI VII X-A X-B	2010 1567 2269 2360	28 30 40 39	93 102 132 115	42 54 95 77	1.0 1.1 1.8 1.5	1.0 1.2 1.6 1.3	28 26 26 26	19 16 17 16	2.8 2.7 3.7 3.7	- 41.4 40.3 42.0	- 22.1 22.2 19.3
Elf	X-B	2480	38	108	45	1.0	1.4	25	16	3.8	-	-
Columbus	X-B	2363	40	120	79	1.6	1.2	28	16	3.8	-	-
Union	X-B	2322	38	110	77	1.4	1.2	23	17	3.8	-	-
Harcor	X-B	2168	33	95	64	1.7	1.5	29	14	3.9	42.0	20.1
Hodgson	X-B	2033	32	87	57	1.6	1.4	26	15	3.7	-	-
Evans	X-B	2027	38	107	70	1.6	1.4	28	14	3.9	-	-
Steele	X-B	1804	30	86	59	1.6	1.4	23	16	3.7	-	-
Swift	X-B	1589	30	86	57	1.8	1.7	23	13	4.3	-	-
Altona	X-B	1324	28	76	51	1.8	2.1	21	14	4.2	-	-

1/ See pages 3 and 5 for description of scoring.

Table 30. Characteristics of late maturing varieties in one or more zones expressed as the percent of the mean of Bossier, Improved Pelican and Williams in the same zone

Percent of the mean of 4 checks									
Variety	Zone	Yield, grain	Days to flowering	Days to maturity	Height	Pods/plant	Weight/seed	Quality	
Tunia	I	111.5	97.0	109.0	98.1	127.2	111.8	121.1	
	IV	114.7	107.4	112.4	112.4	125.0	111.1	121.1	
Jupiter	I	107.5	127.3	113.2	113.0	127.2	111.8	116.2	
	III	114.2	126.7	121.2	155.5	128.0	113.0	145.0	
	IV	98.5	126.7	117.7	118.2	130.5	98.0	100.0	
Hardee, L.S.	I	107.1	121.2	118.4	100.0	169.6	100.0	107.5	
	III	127.4	126.7	121.1	129.6	172.0	96.0	100.0	
	IV	98.9	132.2	117.7	98.8	147.2	91.5	105.3	
UFV-1	I	105.6	106.1	107.0	66.7	98.9	100.0	107.6	
	III	100.6	105.3	111.2	75.5	128.0	107.3	110.0	
	IV	99.1	112.9	110.3	77.7	108.3	98.0	100.0	
Rillita	I	104.4	90.9	96.6	88.9	127.2	94.1	103.1	
	II	80.0	94.3	95.5	87.0	107.3	95.8	123.3	
	VII	132.5	93.3	101.3	105.3	120.5	100.0	95.5	
Bossier	I	103.7	106.1	103.8	92.6	106.0	100.0	112.1	
	II	99.4	104.2	104.9	101.4	96.0	95.8	105.7	
	III	98.3	103.3	100.3	92.9	100.0	90.4	105.0	
	IV	112.6	104.7	99.7	91.1	108.3	104.6	94.7	
	VI	118.5	109.0	105.2	99.5	105.5	101.7	97.5	
	VII	106.2	101.4	110.2	90.8	109.1	93.8	109.1	

Table 30 (continued)

Imp. Pelican	I	98.4	106.1	102.8	122.2	116.6	88.2	94.2
	II	104.4	104.2	99.7	109.7	96.0	83.8	88.1
	III	115.7	111.1	107.6	131.7	128.0	90.4	80.0
	IV	97.1	110.2	106.0	129.8	113.9	85.0	100.0
	VI	90.0	123.5	109.8	136.0	130.8	84.7	104.7
	VII	110.2	137.9	110.1	143.4	131.8	86.7	81.8
Williams	I	98.0	87.9	93.5	85.2	77.7	111.8	94.2
	II	96.2	91.8	95.5	89.0	84.7	119.8	105.7
	III	86.0	85.8	92.1	75.6	72.0	118.6	115.0
	IV	90.2	85.4	94.4	79.5	77.8	111.1	105.3
	VI	91.4	67.8	85.1	64.7	63.3	113.0	97.5
	VII	83.6	60.9	80.0	65.8	59.1	106.7	109.1
SJ-2	I	97.8	109.1	108.1	114.8	141.3	88.2	94.2
	III	110.3	109.2	111.2	133.9	144.0	79.1	95.0
	IV	79.3	118.5	102.9	112.4	183.3	85.0	121.1
IAC-2	I	97.1	106.1	110.1	118.5	130.7	100.0	103.1
	III	99.5	105.3	112.1	136.1	124.0	107.3	125.0
	IV	91.5	118.5	112.4	135.7	147.2	98.0	100.0
CH-3	I	95.8	106.1	113.2	137.0	127.2	94.1	116.6
	III	104.1	105.3	115.8	164.1	136.0	84.7	120.0
Caribe	I	92.8	109.1	121.5	135.2	162.5	82.4	125.6
	IV	81.4	118.5	122.0	139.5	161.1	78.4	105.3
Orba	I	88.4	103.0	98.7	111.1	120.1	82.4	98.7
	III	101.0	115.0	104.8	146.9	124.0	84.7	105.0
	IV	89.0	112.9	100.7	131.8	122.2	86.7	100.0

Table 31. Characteristics of early maturing varieties in one or more zones expressed as the percent of the mean of Williams, Mitchell, Calland and Franklin in the same zone

Percent of the mean of 4 checks								
Variety	Zone	Yield, grain	Days to flowering	Days to maturity	Height	Pods/plant	Weight/seed	Quality
Williams	VI	95.4	99.1	97.4	90.2	76.9	101.3	98.9
	VII	94.3	99.2	98.3	92.2	92.9	97.0	85.7
	X-A	95.5	98.2	103.1	91.3	82.9	98.6	76.9
	X-B	97.8	98.0	94.3	90.5	87.1	106.3	99.2
Mitchell	VI	115.7	102.7	100.5	113.3	102.6	96.2	95.2
	VII	110.6	105.8	103.2	106.9	114.3	103.0	107.1
	X-A	107.9	114.6	103.1	102.2	129.7	104.3	103.6
	X-B	98.8	103.3	104.3	102.7	118.8	93.8	96.4
Calland	VI	100.0	99.1	104.7	99.4	76.9	106.3	102.6
	VII	100.4	95.9	99.3	101.4	100.0	103.0	110.7
	X-A	103.4	93.6	97.3	103.3	93.7	98.6	109.5
	X-B	102.6	95.4	97.1	102.7	91.1	100.0	101.9
Franklin	VI	88.9	99.1	97.4	97.1	143.6	96.2	102.6
	VII	94.7	99.2	99.3	99.5	92.9	97.0	96.4
	X-A	93.3	93.6	95.8	103.3	93.7	98.6	109.5
	X-B	100.7	103.3	104.3	104.1	103.0	100.0	101.9
Forrest	VI	134.2	131.0	113.1	122.5	138.5	86.1	109.9
	VII	90.9	148.8	119.7	94.0	135.7	90.9	107.1
	X-A	88.0	154.4	113.2	127.0	108.1	92.8	85.8
Davis	VI	129.8	152.2	117.3	127.2	128.2	96.2	84.2

Table 31 (continued)

Ransom	VII	128.1	168.5	127.5	110.6	139.3	103.0	71.4
	X-A	86.4	180.1	127.8	113.0	108.1	92.8	74.0
Gasoy 17	VI	123.4	120.4	109.9	87.9	102.6	101.3	102.6
	VII	130.0	145.5	128.5	92.2	121.4	109.1	75.0
	X-A	96.9	173.1	129.9	106.5	97.3	104.3	76.9
Crawford	VI	118.6	116.8	106.8	87.8	102.6	96.2	80.6
	VII	121.8	155.4	131.4	106.9	88.5	103.2	89.3
James	VI	114.6	106.2	102.6	115.6	112.8	101.3	84.2
	X-B	97.5	82.1	81.6	82.4	110.9	87.5	90.9
Cutler 71	VI	109.2	109.7	104.7	108.7	82.1	101.3	80.6
	VI	107.6	106.2	100.5	113.3	92.3	106.3	98.9
	VII	95.4	102.6	98.3	97.7	96.4	103.0	92.9
Elf	X-A	88.3	95.3	100.2	101.1	111.7	98.6	112.4
	X-B	105.9	100.7	98.0	60.8	99.0	100.0	104.7
Columbus	X-B	100.9	106.0	108.8	106.8	110.9	100.0	77.1
Union	X-B	99.1	100.7	99.8	104.1	91.1	106.3	104.7
Harcor	X-B	92.6	87.4	86.2	86.5	114.9	87.5	107.4
Hodgson	X-B	86.8	84.8	78.9	77.0	103.0	93.8	101.9
Evans	X-B	86.5	100.7	97.1	94.6	110.9	87.5	107.4
Steele	X-B	77.0	79.5	78.0	79.7	91.1	100.0	101.9
Swift	X-B	67.8	79.5	78.0	77.0	91.1	81.3	118.5
	X-B	56.5	74.2	68.9	68.9	83.2	87.5	115.7

Table 32. Number of days from emergence to flowering and number of days from flowering to maturity of late maturing varieties. Covariance analysis is given to indicate the relationship between the two characters.

Variety	ZONE					
	I		III		IV	
	Flower	Maturity	Flower	Maturity	Flower	Maturity
Jupiter	42	67	65	68	46	65
Hardee, LS	40	74	65	68	48	63
UFV-1	35	68	54	68	41	63
Bossier	35	65	53	57	38	56
Imp. Pelican	35	64	57	61	40	60
Williams	29	61	44	57	31	58
SJ-2	36	68	56	66	43	54
IAC-2	35	71	54	69	43	63
Orba	34	61	59	56	41	54
Location mean	35.7	66.6	56.3	63.3	41.2	59.6

Covariance analysis

Source	d.f.	ΣX^2	ΣY^2	ΣXY	γ
Total	26	2690.5	757.41	142.37	
Variety	8	568.5	434.07	311.04	.63*
Zone	2	2059.0	220.96	-145.19	-.22
V x Z	16	63.0	102.37	-23.48	-.29

1/ X = days from emergence to flowering.
Y = days from flowering to maturity

* $\rho \leq .05$

Table 33. Number of days from emergence to flowering and number of days from flowering to maturity of early maturing varieties. Covariance analysis is given to indicate the relationship between the two characters.

Variety	ZONE					
	VI		VII		X-A	
	Flower	Maturity	Flower	Days Maturity	Flower	Maturity
Bossier	38	56	50	89	80	100
Williams	31	58	30	71	42	101
Forrest	37	71	45	78	66	90
Davis	43	69	51	80	77	99
Ransom	34	71	44	88	74	105
Mitchell	29	67	32	74	49	93
Cutler 71	30	66	31	70	41	97
Calland	28	72	29	73	40	94
Franklin	28	65	30	72	40	92
Location mean	33.1	66.1	38.0	77.2	56.6	96.8
Covariance analysis	d.f.	$\Sigma X^2 / 1$	ΣXY	$\Sigma Y^2 / 1$	γ	
Source	26	6086.7	4136.44	5200.96		
Total	8	2636.7	667.11	324.30		
Variety	2	2753.6	3408.44	4338.96		
Zone	16	696.4	60.89	537.70		
V x Z						

1/
X = days from emergence to flowering
Y = days from flowering to maturity

* $P < .05$

** P < .01

TABLES OF DATA FROM INDIVIDUAL SITES

TABLE 34 COMBINED ANALYSIS FOR SITES IN ZONE I, ISVEX 1978

VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
TUNIA	2109.26	32.04	105.33	3.13	2.92	72.78	68.38	52.61	1.35
JUPITER	2031.73	42.40	109.02	3.20	2.94	67.44	73.59	61.32	1.92
HARDEE LS	2025.46	39.92	113.96	3.00	2.78	65.97	73.03	54.39	1.42
UFV 1	1996.66	34.88	103.42	3.20	3.00	67.03	66.84	36.30	1.04
RILLITO	1975.39	30.33	92.83	3.05	3.08	67.67	59.16	48.43	1.52
BOSSIER	1961.21	35.46	99.56	3.05	3.06	69.67	67.88	49.70	1.44
IMPROVED PELICAN	1859.95	34.90	99.17	8.95	3.06	68.17	60.00	66.04	1.79
WILLIAMS	1853.13	28.75	89.63	2.85	3.06	65.22	63.66	46.00	1.27
SJ 2	1848.90	35.67	103.73	3.20	3.25	69.17	63.72	62.41	1.98
IAC 2	1835.76	34.75	105.54	3.25	3.11	67.92	66.03	63.67	1.65
CH 3	1812.26	34.77	109.44	3.10	2.89	66.25	67.03	73.87	2.12
CARIBE	1754.99	36.46	116.60	2.98	2.92	71.06	73.44	72.88	2.08
ORBA	1670.53	34.38	94.73	3.10	2.97	70.92	64.63	60.03	2.25
GRAND MEAN	1902.71	34.98	103.30	3.54	3.00	68.40	66.72	57.51	1.68
NUMBER EXPERIMENTS CONTRIBUTING	13	13	12	10	9	9	8	13	13
STANDARD ERROR OF VARIETY MEAN	131.75	.67	1.92	1.64	.10	2.41	3.29	2.29	.18
COEFFICIENT OF VARIATION	49.932	13.79%	12.85%	292.94%	19.49%	21.12%	27.93%	28.70%	75.56%
5% LSD VARIETY MEANS (*****=NS)	*****	1.87	5.36	*****	*****	*****	9.27	6.40	.49
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)									
YIELD	1.00	.20++	.23++	-.05	-.51++	-.48++	-.19++	.38++	.02
DAYS TO FLOWER	.676	.676	.624	.520	.468	.468	.416	.676	.676
DAYS TO MATURITY	.676	.676	.624	.520	.468	.468	.416	.676	.676
NODULE ABUND 1	.23++	.63++	1.00	-.06	-.23++	.13++	.04	.16++	-.02
NODULE ABUND 2	-.05	.624	.624	1.00	.08	.416	.364	.624	.624
NODULE ACT. 1	-.51++	-.28++	-.23++	.08	1.00	-.25++	-.20++	-.13++	.17++
NODULE ACT. 2	.468	.468	.416	.468	.468	1.00	.364	.468	.468
PLANT HEIGHT	.416	.416	.364	.416	.364	.468	.416	.416	.416
LODGING	.02	.04	.16++	-.01	-.13++	-.35++	-.07	1.00	.56++
SHATTER	.676	.676	.624	.520	.468	.468	.416	.676	.676
PLANTS HARVEST	-.21++	.16++	.21++	-.04	-.08	.10+	-.08	-.05	.05
PODS PER PLANT	.02	.520	.468	.468	.29++	.468	.416	.520	.520
POD HEIGHT	.624	.624	.572	.520	.468	.468	.416	.624	.624
100 SEED WEIGHT	.36++	.13++	.27++	.01	-.31++	.03	.30++	.31++	.03
QUALITY OF SEED	-.06	.26++	.36++	-.04	-.05	.21++	.416	.676	.42++
PERCENT GERMIN.	.67++	-.17++	.28++	.24++	.01	.468	.364	.624	.624
	.364	.364	.364	.364	.312	.312	.260	.364	.364

TABLE 34 COMBINED ANALYSIS FOR SITES IN ZONE I, ISVEX 1978

VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
TUNIA	1.15	128.65	36.06	11.34	18.56	2.65	68.71
JUPITER	1.03	159.52	36.49	13.71	19.07	2.63	64.75
HARDEE LS	1.08	132.96	48.30	11.78	16.61	2.40	68.79
UFV 1	1.20	172.06	28.13	9.92	16.69	2.35	75.68
KILLITO	1.03	162.44	36.16	8.00	16.21	2.31	64.39
BOSSIER	1.00	186.50	29.52	12.21	16.67	2.54	69.36
IMPROVED PELICAN	1.10	194.75	33.30	12.60	15.14	2.10	72.89
WILLIAMS	1.00	200.77	22.43	8.86	18.58	2.10	71.50
SJ 2	1.48	161.63	40.42	12.60	14.89	2.08	78.04
IAC 2	1.23	153.19	36.80	13.15	16.66	2.31	68.75
CH 3	1.28	158.27	35.84	12.46	15.65	2.58	69.21
CARIBE	1.50	161.58	45.98	11.34	13.53	2.81	67.64
OREA	2.10	185.42	33.90	11.53	13.66	2.21	86.89
GRAND MEAN	1.24	165.98	35.64	11.50	16.30	2.39	71.28
NUMBER EXPERIMENTS CONTRIBUTING	10	12	13	12	13	12	7
STANDARD ERROR OF VARIETY MEAN	.15	8.19	2.64	.60	.50	.16	4.39
COEFFICIENT OF VARIATION	74.42%	34.17%	53.35%	36.37%	22.18%	45.26%	32.61%
5% LSD VARIETY MEANS (*****=NS)	.41	22.90	7.37	1.69	1.40	.44	12.38
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)							
YIELD KG/HA	-.21++	.02	.38++	.01	.36++	-.06	.67++
DAYS TO FLOWER	520	624	676	624	676	624	364
DAYS TO MATURITY	.16++	-.21++	.23++	.05	.26++	.13++	-.17++
	520	624	676	624	676	624	364
NODULE ABUND 1	.21++	-.37++	.24++	-.09+	.27++	.36++	-.28++
	468	572	624	572	624	572	364
NODULE ABUND 2	-.04	.11+	-.06	.01	-.08	-.04	.24++
	468	520	520	520	520	520	364
NODULE ACT. 1	-.08	.29++	-.31++	.14++	-.16++	-.05	.01
	416	468	468	468	468	468	312
NODULE ACT. 2	.10+	-.47++	.03	-.28++	.11+	.21++	-.53++
	468	468	468	468	468	416	312
PLANT HEIGHT	-.08	-.41++	.30++	-.16++	.02	.22++	-.29++
	416	416	416	416	416	364	260
LOGGING	-.05	.04	.31++	.49++	-.12++	-.13++	.44++
	520	624	676	624	676	624	364
SHATTER	.05	.09+	.03	.42++	-.17++	-.07	.27++
	520	624	676	624	676	624	364
PLANTS HARVEST	1.00	-.14++	-.01	-.12++	-.18++	.22++	-.20++
	520	520	520	520	520	468	312
PODS PER PLANT	-.14++	1.00	-.34++	.17++	-.33++	-.32++	.33++
	520	624	624	572	624	572	364
POD HEIGHT	-.01	-.34++	1.00	-.15++	.03	.11++	-.00
	520	624	676	624	676	624	364
100 SEED WEIGHT	-.12++	.17++	-.15++	1.00	-.18++	-.30++	.42++
	520	572	624	624	624	572	364
QUALITY OF SEED	-.18++	-.33++	.03	-.18++	1.00	.15++	-.13+
	520	624	676	624	676	624	364
PERCENT GERM.	.22++	-.32++	.11+	-.30++	.15++	1.00	-.50++
	468	572	624	572	624	624	364
	312	364	364	364	364	364	364

TABLE 35 COMBINED ANALYSIS OF AFRICAN SITES IN ZONE 1 ISVEX 1978

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODES ABUND 1	NODES ABUND 2	NODES ACT. 1	NODES ACT. 2	PLANT HEIGHT	LODGING
BOSSIER	1588.96	34.56	102.17	3.25	3.75	86.25	91.25	47.96	1.56
JUPITER	1554.37	41.31	108.67	3.33	3.75	92.92	96.87	58.28	1.50
UFV 1	1477.07	34.44	108.00	3.33	3.75	89.17	93.38	37.74	1.13
HARDEE LS	1475.09	39.06	116.17	3.08	3.63	85.00	93.13	49.58	1.13
CARIBE	1428.93	36.56	127.33	3.25	4.00	90.00	95.63	71.38	2.00
IAC 2	1331.00	34.06	108.58	3.50	4.00	92.08	85.00	57.80	1.75
IMPROVED PELICAN	1311.41	33.56	98.50	3.17	3.88	93.33	81.88	55.01	1.63
WILLIAMS	1289.01	26.56	84.42	2.83	4.00	85.42	84.38	39.38	1.75
ORBA	1208.26	33.44	94.42	3.08	3.75	93.33	95.00	52.24	2.13
RILLITO	1195.03	28.50	88.33	3.33	3.83	86.67	88.13	42.70	1.81
SJ 2	1177.53	35.25	105.67	3.42	4.00	94.17	88.13	52.50	1.75
TUNIA	1101.78	29.75	110.33	3.33	3.88	92.50	98.13	43.08	1.19
RANSOM	1093.55	27.44	94.92	3.25	4.00	90.83	84.38	32.07	1.19
CH 3	1092.20	34.13	116.25	3.33	3.38	87.92	91.25	64.47	2.31
GRAND MEAN	1308.87	33.47	104.55	3.25	3.83	89.97	90.18	50.30	1.63
NUMBER EXPERIMENTS CONTRIBUTING	4	4	3	3	2	3	2	4	4
STANDARD ERROR OF VARIETY MEAN	156.09	1.28	3.46	.19	.19	3.45	5.94	2.45	.30
COEFFICIENT OF VARIATION	47.70%	15.31%	11.45%	20.36%	14.30%	13.28%	18.63%	19.49%	72.66%
5% LSD VARIETY MEANS (*****=NS)	*****	3.66	10.05	*****	*****	*****	*****	7.01	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)									
YIELD	1.00	.11	-.11	.22++	-.10	.05	-.02	.48++	.12
DAYS TO FLOWER	.224	.224	.168	.168	.112	.168	.112	.224	.224
DAYS TO MATURITY	.11	1.00	.54++	-.30++	-.13	-.22++	.23+	.13	-.14+
NODES ABUND 1	.224	.224	.168	.168	.112	.168	.112	.224	.224
NODES ABUND 2	-.11	.54++	1.00	-.13	-.05	-.15	-.14	.10	-.00
PLANT HEIGHT	.168	.168	.168	.112	.112	.112	.112	.168	.168
LODGING	.224	-.30++	-.13	1.00	.18	.53++	-.08	.35++	.26++
SHATTER	.168	.168	.112	.168	.112	.168	.112	.168	.168
HARVEST	-.10	-.13	-.05	.18	1.00	.07	-.09	-.16	-.09
PODS PER PLANT	.112	.112	.56	.112	.112	.112	.112	.112	.112
FOOD HEIGHT	.05	-.22++	-.15	.53++	.07	1.00	.22+	.19+	.06
100 SEED WEIGHT	.48++	.13	.10	.35++	.112	.168	.112	.168	.168
QUALITY OF SEED	.224	.224	.168	.168	.112	.168	.112	.168	.168
PERCENT GERM.	.12	-.14+	-.00	.26++	-.09	.06	-.33++	.51++	1.00
	.224	.224	.168	.168	.112	.168	.112	.224	.224
	-.34++	.30++	.35++	-.47++	.07	-.23++	.17	-.22++	-.29++
	.168	.168	.112	.168	.112	.168	.112	.168	.168
	.24++	-.08	-.38++	-.22++	-.11	-.17+	-.09	.09	.06
	.224	.224	.168	.168	.112	.168	.112	.224	.224
	.34++	.26++	.36++	-.01	.06	-.06	.05	.37++	.08
	.41++	.02	-.12	.26++	.112	.168	.112	.224	.224
	.168	.168	.112	.168	.112	.168	.112	.168	.168
	.41++	-.10	-.22++	.07	-.14	-.10	-.01	.07	-.07
	.224	.224	.168	.168	.112	.168	.112	.224	.224
	-.37++	.26++	.41++	-.12	.16	.00	.15	-.32++	-.20++
	.224	.224	.168	.168	.112	.168	.112	.224	.224
	.21+	-.20+	-.16	.41++	-.08	.31++	.20	.41++	.29++
	.112	.112	.112	.112	.56	.112	.56	.112	.112

TABLE 35 COMBINED ANALYSIS OF AFRICAN SITES IN ZONE 1 ISVEX 1978

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
ROSSIER	1.00	175.06	24.06	11.58	18.71	2.44	57.63
JUFITER	1.08	146.50	34.06	13.83	20.93	2.50	52.75
UFV 1	1.33	154.50	23.44	10.46	17.41	2.44	64.38
HARDEE LS	1.17	114.88	38.76	11.00	18.38	2.50	54.63
CARIBE	1.92	149.13	48.73	8.83	14.33	2.75	59.88
IAC 2	1.42	136.81	26.83	14.83	18.00	2.13	46.25
IMPROVED PELICAN	1.25	192.25	24.97	13.25	16.06	2.13	62.38
WILLIAMS	1.00	200.25	15.83	9.25	19.16	2.06	54.88
ORBA	1.75	168.38	24.16	12.83	14.91	2.25	74.25
RILLITO	1.08	145.94	27.02	8.83	17.37	2.13	42.75
SJ 2	1.75	137.00	25.04	12.75	15.21	2.44	64.88
TUNIA	1.42	88.63	26.07	10.50	20.34	2.81	68.13
RANSOM	1.33	165.75	18.26	7.83	18.42	2.38	39.75
CH 3	1.50	130.25	26.91	12.17	16.11	2.69	48.50
GRAND MEAN	1.36	150.38	27.44	11.28	17.52	2.40	56.50
NUMBER EXPERIMENTS CONTRIBUTING	3	4	4	3	4	4	2
STANDARD ERROR OF VARIETY MEAN	.27	16.41	4.75	1.26	.70	.26	9.12
COEFFICIENT OF VARIATION	69.37%	43.64%	69.18%	38.71%	15.86%	43.00%	45.67%
5% LSD VARIETY MEANS (****=NS) *****	*****	46.93	13.57	3.67	1.99	*****	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)							
YIELD KG/HA	-.34++	.24++	.34++	.41++	.41++	-.37++	.21+
DAYS TO FLOWER	1.68	224	224	168	224	224	112
DAYS TO MATURITY	.30++	-.08	.26++	.02	-.10	.26++	-.20+
	1.68	224	224	168	224	224	112
NODULE	.35++	-.38++	.36++	-.12	-.22++	.41++	-.16
	112	168	168	112	168	168	112
NODULE ABUND 1	-.47++	-.22++	-.01	.26++	.07	-.12	.41++
	1.68	168	168	168	168	168	112
NODULE ABUND 2	.07	-.11	.06	-.14	-.14	.16	-.08
	112	112	112	112	112	112	56
NODULE ACT. 1	-.23++	-.17+	-.06	.09	-.10	.00	.31++
	1.68	168	168	168	168	168	112
NODULE ACT. 2	.17	-.09	.05	-.14	-.01	.15	.20
	112	112	112	112	112	112	56
PLANT HEIGHT	-.22++	.09	.37++	.67++	.07	-.32++	.41++
	1.68	224	224	168	224	224	112
LODGING	-.29++	.06	.08	.46++	-.07	-.20++	.29++
	1.68	224	224	168	224	224	112
SHATTER	1.00	-.09	.11	-.28++	-.36++	.28++	-.21+
	1.68	168	168	168	168	168	112
PLANTS HARVEST	-.09	1.00	-.20++	.14	.05	-.24++	.04
	1.68	224	224	168	224	224	112
PODS PER PLANT	.11	-.20++	1.00	.04	-.05	-.02	.04
	1.68	224	224	168	224	224	112
POD HEIGHT	-.28++	.14	.04	1.00	.27++	-.43++	.40++
	1.68	168	168	168	168	168	112
100 SEED WEIGHT	-.36++	.05	-.05	.27++	1.00	-.24++	.01
	1.68	224	224	168	224	224	112
QUALITY OF SEED	.28++	-.24++	-.02	-.43++	-.24++	1.00	-.22+
	1.68	224	224	168	224	224	112
PERCENT GERM.	-.21+	.04	.04	.40++	.01	-.22+	1.00
	112	112	112	112	112	112	112

TABLE 36 COMBINED ANALYSIS FOR OCEANIA AND ASIAN SITES IN ZONE I

VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
CH 3	1954.66	34.00	97.25	4.00	2.25	56.67	55.00	67.26	1.50
SJ 2	1947.26	34.25	92.63	3.75	2.25	67.50	52.92	55.61	1.25
JUPITER	1871.63	39.63	101.63	3.50	2.00	62.08	63.75	46.69	1.00
HARDEE LS	1674.71	38.38	105.75	3.00	1.75	64.17	70.00	33.99	1.00
TUNIA	1652.00	32.56	95.25	3.25	2.25	76.25	45.00	42.84	1.00
KILLITO	1585.84	30.06	87.38	3.25	2.50	63.75	36.25	34.55	1.00
CARIBE	1563.75	35.56	111.00	3.50	2.25	71.25	73.75	65.62	1.00
IAC 2	1557.19	34.00	96.75	3.50	2.50	57.08	60.42	51.36	1.25
IMPROVED PELICAN	1533.95	34.38	89.63	63.00	3.00	50.83	43.75	62.94	1.75
ORBA	1525.31	33.56	88.56	3.75	2.25	52.50	38.75	51.15	1.25
ROSSIER	1507.07	34.00	93.88	3.00	2.50	71.25	40.42	40.73	1.00
WILLIAMS	1405.70	28.69	84.75	3.00	2.50	63.75	57.50	35.48	1.00
UFV 1	1181.90	33.00	98.25	4.00	2.50	60.42	62.08	26.15	1.00
GRAND MEAN	1612.38	34.00	95.59	8.04	2.35	62.88	53.81	47.26	1.15
NUMBER EXPERIMENTS CONTRIBUTING	4	4	4	2	2	3	3	4	4
STANDARD ERROR OF VARIETY MEAN	175.07	.67	2.13	10.70	.18	6.31	6.13	3.97	.24
COEFFICIENT OF VARIATION	43.43%	7.94%	8.91%	376.53%	22.23%	34.77%	39.48%	33.61%	83.27%
5% LSD VARIETY MEANS (****=NS)	*****	1.94	6.11	30.10	.52	*****	17.90	11.39	*****

CORRELATIONS AND NUMBER OF OBSERVATIONS

(+ - PROB=.05, ++ - PROB=.01)

YIELD	1.00	.13	.54++	-.01	-.20+	-.18+	.44++	.58++	.26++
DAYS TO FLOWER	.13	1.00	.63++	.01	-.29++	.25++	-.14	.08	-.13
DAYS TO MATURITY	.54++	.63++	1.00	-.10	-.31++	.21++	.12	.29++	-.05
NODULE ABUND 1	-.01	.01	-.10	1.00	.16	.156	-.07	.09	.00
NODULE ABUND 2	-.20+	-.29++	.16	.16	1.00	.07	.41++	.104	.104
NODULE ACT. 1	-.18+	.25++	.21++	.09	.07	1.00	-.37++	-.09	-.21++
NODULE ACT. 2	.44++	.14	.156	.104	.104	.156	.156	.33++	.27++
PLANT HEIGHT	.58++	.08	.29++	.09	-.01	-.09	.33++	1.00	.50++
LODGING	.26++	-.13	-.05	.00	.00	-.21++	.27++	.50++	1.00
SHATTER	.00	.00	.00	.00	.00	.156	.156	.208	.208
PLANTS HARVEST	.51++	-.04	.18+	.05	.31++	.156	.156	.208	.208
PODS PER PLANT	.30++	-.20++	-.04	.11	-.34++	.156	.156	.208	.208
POD HEIGHT	.09	.51++	.28++	-.07	-.09	.20+	.156	.29++	.09
100 SEED WEIGHT	.55++	.08	.41++	-.14	-.09	.31++	-.36++	.02	.00
QUALITY OF SEED	-.10	.14	.17	.14	.04	-.20+	.16	.06	.00
PERCENT GERM.	.00	.00	.00	.00	.00	.00	.00	.00	.00
	0	0	0	0	0	0	0	0	0

TABLE 36 COMBINED ANALYSIS FOR OCEANIA AND ASIAN SITES IN ZONE I

VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
CH 3	1.00	228.25	35.18	12.03	13.16	1.50	.00
SJ 2	1.00	228.63	40.78	13.34	11.21	1.00	.00
JUPITER	1.00	214.50	31.46	14.65	13.20	1.75	.00
HARDEE LS	1.00	183.94	40.56	11.39	12.24	1.50	.00
TUNIA	1.00	169.88	35.11	10.09	16.18	1.25	.00
RILLITO	1.00	216.56	30.59	7.89	12.89	1.25	.00
CARIBE	1.00	204.94	45.49	11.68	8.69	1.75	.00
IAC 2	1.00	213.00	33.69	11.61	12.56	1.50	.00
IMPROVED PELICAN	1.00	267.13	30.29	12.26	11.61	1.75	.00
ORBA	1.00	232.75	30.53	9.08	11.95	1.50	.00
BOSSIER	1.00	265.94	25.83	9.43	12.83	1.75	.00
WILLIAMS	1.00	262.81	17.82	9.21	16.58	1.50	.00
UFV 1	1.00	223.50	22.30	7.31	12.38	1.75	.00
GRAND MEAN	1.00	223.99	32.28	10.77	12.73	1.52	.00
NUMBER EXPERIMENTS CONTRIBUTING	4	4	4	4	4	2	0
STANDARD ERROR OF VARIETY MEAN	.00	14.04	4.06	.70	.62	.17	.00
COEFFICIENT OF VARIATION	.00%	25.08%	50.30%	26.08%	19.37%	31.68%	.00%
5% LSD VARIETY MEANS (*****NS)	.00	40.27	11.64	2.01	1.77	.48	.00
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)							
YIELD KG/HA	.00	.51++	.30++	.09	.55++	-.10	.00
DAYS TO FLOWER	208	208	208	208	208	104	0
	.00	-.04	-.20++	.51++	.08	.14	.00
DAYS TO MATURITY	208	208	208	208	208	104	0
	.00	.18+	-.04	.28++	.41++	.17	.00
NODULE AROUND 1	208	208	208	208	208	104	0
	.00	.05	.11	-.07	-.14	.14	.00
NODULE AROUND 2	104	104	104	104	104	104	0
	.00	.31++	-.31++	-.09	-.09	.04	.00
NODULE ACT. 1	104	104	104	104	104	104	0
	.00	-.13	-.34++	.20+	.31++	-.20+	.00
NODULE ACT. 2	156	156	156	156	156	104	0
	.00	-.02	.60++	-.03	-.36++	.16	.00
PLANT HEIGHT	156	156	156	156	156	104	0
	.00	.27++	.42++	.29++	.02	.06	.00
LODGING	208	208	208	208	208	104	0
	.00	.18++	.26++	.09	.00	.00	.00
SHATTER	208	208	208	208	208	104	0
	1.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST	208	208	208	208	208	104	0
	.00	1.00	-.20++	.07	.46++	.19+	.00
PODS PER PLANT	208	208	208	208	208	104	0
	.00	-.20++	1.00	-.02	-.40++	.16	.00
POD HEIGHT	208	208	208	208	208	104	0
	.00	.07	-.02	1.00	-.02	.04	.00
100 SEED WEIGHT	208	208	208	208	208	104	0
	.00	.46++	-.40++	-.02	1.00	.14	.00
QUALITY OF SEED	208	208	208	208	208	104	0
	.00	.19+	-.16	-.04	-.14	1.00	.00
PERCENT GERM.	104	104	104	104	104	104	0
	.00	.00	.00	.00	.00	.00	1.00
	0	0	0	0	0	0	0

TABLE 37 COMBINED ANALYSIS OF SOUTH AMERICAN SITES IN ZONE I ISVEX 1978

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEULE ABUND 1	NODEULE ABUND 2	NODEULE ACT. 1	NODEULE ACT. 2	PLANT HEIGHT	LOGGING
TUNIA	2844.85	32.96	106.36	3.07	2.64	63.25	66.90	60.44	1.57
UFV 1	2569.69	35.93	103.79	3.11	2.86	59.90	63.20	37.30	1.00
RILLITO	2553.95	31.25	94.96	2.93	2.82	61.05	59.65	54.88	1.32
HARDEE LS	2455.82	42.50	115.36	3.11	2.75	62.00	65.85	66.29	1.68
JUPITER	2431.70	42.57	111.68	3.18	2.86	61.40	71.50	68.34	2.00
IMPROVED PELICAN	2408.16	35.71	102.86	2.86	2.68	64.70	59.50	72.06	1.57
WILLIAMS	2380.84	29.82	91.89	2.93	2.64	60.15	58.60	52.21	1.11
BOSSIER	2371.75	36.75	99.50	2.96	2.86	66.15	69.85	52.96	1.32
IAC 2	2235.17	35.04	107.61	3.21	2.93	62.25	59.40	70.21	1.64
SJ 2	2194.20	36.50	106.64	3.18	3.04	61.00	61.70	69.47	2.25
ORBA	1987.61	35.21	96.25	3.14	2.68	66.40	66.15	65.20	2.50
CARIBE	1919.30	36.54	116.68	2.93	2.54	65.15	68.50	78.62	2.21
GRAND MEAN	2362.75	35.90	104.46	3.05	2.77	62.78	64.23	62.33	1.68
NUMBER EXPERIMENTS CONTRIBUTING	7	7	7	7	7	5	5	7	7
STANDARD ERROR OF VARIETY MEAN	199.98	1.13	2.71	.11	.13	2.72	3.97	3.34	.20
COEFFICIENT OF VARIATION	44.79%	16.72%	13.74%	18.51%	24.65%	19.34%	27.63%	28.35%	61.88%
5% LSD VARIETY MEANS (****=NS)	*****	3.20	7.66	*****	*****	*****	*****	9.43	.56
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)									
YIELD	1.00	.16++	.18++	-.49++	-.43++	-.38++	-.15+	.29++	.05
DAYS TO FLOWER	.336	.336	.336	.336	.336	.240	.240	.336	.336
DAYS TO MATURITY	.16++	1.00	.65++	-.21++	-.11+	-.06	-.08	.20++	.16++
NODEULE ABUND 1	.336	.336	1.00	-.26++	-.16++	-.02	-.05	.16++	.04
NODEULE ABUND 2	.336	.336	.336	.336	.336	.240	.240	.336	.336
NODEULE ACT. 1	.336	.336	.336	1.00	.75++	-.61++	-.51++	-.07	.19++
NODEULE ACT. 2	.336	.336	.336	.336	.336	.240	.240	.336	.336
PLANT HEIGHT	.29++	.20++	.16++	-.07	-.17++	-.30++	-.06	1.00	.56++
LOGGING	.05	.16++	.04	.19++	.17++	.240	.240	.336	1.00
SHATTER	.18++	.11	.336	.336	.336	.240	.240	.336	.336
PLANTS HARVEST	.17++	.28++	.336	.336	.336	.240	.240	.336	.336
PODS PER PLANT	.16++	.25++	.336	.336	.336	.240	.240	.336	.336
POD HEIGHT	.17++	.15++	.336	.336	.336	.240	.240	.336	.336
100 SEED WEIGHT	.34++	.07	.336	.336	.336	.240	.240	.336	.336
QUALITY OF SEED	.336	.336	.336	.336	.336	.240	.240	.336	.336
PERCENT GERM.	.68++	.10	.336	.336	.336	.240	.240	.336	.336
	288	288	288	288	288	240	240	288	288

TABLE 37 COMBINED ANALYSIS OF SOUTH AMERICAN SITES IN ZONE I ISVEX 1978

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
TUNIA	1.04	145.18	39.62	12.01	18.81	2.96	66.00
UFV 1	1.17	140.86	35.77	8.94	18.78	2.54	77.04
RILLITO	1.00	155.25	42.64	7.47	16.94	2.71	71.00
HARDEE LS	1.08	143.46	55.25	11.90	17.38	2.82	64.67
JUPITER	1.00	151.93	40.94	11.87	20.42	2.79	71.04
IMPROVED PELICAN	1.04	183.43	38.93	12.25	16.16	2.36	76.71
WILLIAMS	1.00	187.61	28.15	8.56	19.54	2.39	71.25
BOSSIER	1.00	166.43	34.13	12.21	17.11	2.79	69.17
IAC 2	1.21	144.46	43.06	12.63	17.91	2.86	72.58
SJ 2	1.42	145.50	48.61	11.83	16.26	2.25	83.54
ORBA	2.50	173.82	41.50	11.34	13.86	2.43	91.25
CARIBE	1.54	157.71	43.92	11.91	15.04	3.14	61.75
GRAND MEAN	1.25	157.97	41.04	11.08	17.35	2.67	73.00
NUMBER EXPERIMENTS CONTRIBUTING	6	7	7	7	7	7	6
STANDARD ERROR OF VARIETY MEAN	.20	10.55	3.53	.70	.77	.23	5.68
COEFFICIENT OF VARIATION	78.99%	35.33%	45.55%	33.33%	23.44%	45.26%	38.14%
5% LSD VARIETY MEANS (****=NS)	.57	29.78	9.98	1.97	2.17	*****	16.11
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)							
YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA
DAYS TO FLOWER	1.18++	1.17++	1.16++	1.17++	1.17++	1.17++	1.17++
DAYS TO MATURITY	1.11	1.11	1.11	1.11	1.11	1.11	1.11
NODULE ABUND 1	1.16++	1.16++	1.16++	1.16++	1.16++	1.16++	1.16++
NODULE ABUND 2	1.07	1.07	1.07	1.07	1.07	1.07	1.07
NODULE ACT. 1	1.07	1.07	1.07	1.07	1.07	1.07	1.07
NODULE ACT. 2	1.07	1.07	1.07	1.07	1.07	1.07	1.07
PLANT	1.09	1.09	1.09	1.09	1.09	1.09	1.09
LOGGING	1.23++	1.23++	1.23++	1.23++	1.23++	1.23++	1.23++
SHATTER	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PLANTS	1.01	1.01	1.01	1.01	1.01	1.01	1.01
PODS PER PLANT	1.03	1.03	1.03	1.03	1.03	1.03	1.03
POD	1.01	1.01	1.01	1.01	1.01	1.01	1.01
100 SEED WEIGHT	1.01	1.01	1.01	1.01	1.01	1.01	1.01
QUALITY OF SEED	1.01	1.01	1.01	1.01	1.01	1.01	1.01
PERCENT GERM.	1.01	1.01	1.01	1.01	1.01	1.01	1.01

TABLE 38 COMBINED ANALYSIS FOR ZONE II, ISVEX 1978

VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
IMPROVED PELICAN	1722.57	42.33	96.42	3.19	2.69	85.83	60.42	53.24	1.35
BOSSIER	1641.16	41.79	100.67	2.69	2.50	87.08	48.75	48.78	1.40
WILLIAMS	1588.30	37.42	92.00	2.38	2.13	86.25	36.67	43.29	1.40
COBB	1505.65	38.42	101.71	2.75	2.25	95.42	67.50	36.72	1.30
RILLITO	1320.33	38.29	92.29	2.19	2.13	85.42	37.08	41.97	1.30
GRAND MEAN	1555.60	39.65	96.62	2.64	2.34	88.00	50.08	44.80	1.35
NUMBER EXPERIMENTS CONTRIBUTING	6	6	6	4	4	3	3	6	5
STANDARD ERROR OF VARIETY MEAN	121.94	.55	1.48	.15	.15	3.34	5.97	3.01	.18
COEFFICIENT OF VARIATION	38.40%	6.79%	7.49%	23.26%	25.46%	13.13%	41.28%	32.92%	60.01%
5% LSD VARIETY MEANS (*****=NS)	*****	1.62	4.36	.43	.42	*****	19.46	8.88	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)									
YIELD	1.00	-.29++	-.27++	.12	-.21	.38++	.69++	.49++	.31++
DAYS TO FLOWER	-.29++	1.00	.87++	.42++	.18	.30+	.74++	-.01	-.32++
DAYS TO MATURITY	-.27++	.87++	1.00	.06	-.05	.26+	.54++	-.02	-.31++
NODULE ABUND 1	.12	.42++	.06	1.00	.55++	.01	.55++	-.36++	-.09
NODULE ABUND 2	-.21	.18	-.05	.55++	.12	.60	.60	.80	.80
NODULE ACT. 1	.38++	.30+	.26+	.01	.12	1.00	.50++	-.10	-.03
NODULE ACT. 2	.69++	.74++	.54++	.55++	.28+	.50++	1.00	.03	-.02
PLANT HEIGHT	.49++	-.01	-.02	-.36++	-.61++	-.10	.03	1.00	.42++
LODGING	.31++	-.32++	1.00	.80	.80	.60	.60	.120	1.00
SHATTER	.48++	-.23+	-.15	.80	.80	.60	.60	.42++	1.00
PLANTS HARVEST	.37++	-.01	-.16	.45++	.33++	.60	.60	.70++	.49++
FODS PER PLANT	.30++	.24++	.28++	-.20	-.34++	.43++	.78++	.03	-.12
POD HEIGHT	-.05	.81++	.70++	.39++	.24+	.60	.60	.37++	.18
100 SEED WEIGHT	.07	.34++	.35++	-.08	-.31++	.27+	.54++	.08	-.17
QUALITY OF SEED	-.17	-.24++	-.29++	.80	.80	.11	.17	.100	-.05
PERCENT GERM.	.69++	.69++	.11	.14	-.19	-.06	-.37++	-.10	-.29++
	80	80	80	80	80	.26+	.60	.120	1.00
						.68++	.60	.51++	.30++
						80	80	80	80

TABLE 38 COMBINED ANALYSIS FOR ZONE II, ISVEX 1978

VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
IMPROVED PELICAN	1.30	253.63	21.16	7.59	14.47	1.96	83.25
BOSSIER	1.25	225.00	17.10	7.42	15.88	2.42	60.13
WILLIAMS	1.50	236.79	15.04	6.32	20.12	2.38	74.00
CORB	1.45	244.17	15.42	5.86	17.63	2.63	58.50
RILLITO	1.30	212.04	18.97	5.11	15.53	2.79	61.31
GRAND MEAN	1.36	234.33	17.54	6.46	16.73	2.43	67.44
NUMBER EXPERIMENTS CONTRIBUTING	5	6	6	5	6	6	4
STANDARD ERROR OF VARIETY MEAN	.12	10.77	1.41	.30	.42	.29	7.23
COEFFICIENT OF VARIATION	38.38%	22.51%	39.41%	20.67%	12.40%	58.22%	42.86%
5% LSD VARIETY MEANS (****=NS)	*****	*****	4.16	.89	1.25	*****	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)							
YIELD KG/HA	.48++	.37++	.30++	-.05	.07	-.17	.69++
DAYS TO FLOWER	100	120	120	100	120	120	80
DAYS TO MATURITY	-.23+	-.01	.24++	.81++	.34++	-.24++	.69++
NOBULE AROUND 1	100	120	120	100	120	120	80
NOBULE AROUND 2	-.15	-.16	.28++	.70++	.35++	-.29++	.11
NOBULE ACT. 1	100	120	120	100	120	120	80
NOBULE ACT. 2	-.26+	.45++	-.20	.39++	-.08	-.10	.14
PLANT HEIGHT	80	80	80	80	80	80	80
LODGING	-.46++	.33++	-.34++	.24+	-.31++	.16	-.19
SHATTER	80	80	80	80	80	80	80
PLANTS HARVEST	.17	.43++	-.00	.27+	.11	-.06	.26+
PODS PER PLANT	.32+	.78++	.26+	.54++	.17	-.37++	.68++
POD HEIGHT	60	60	60	60	60	60	60
100 SEED WEIGHT	.70++	.03	.37++	.08	.04	-.10	.51++
QUALITY OF SEED	100	120	120	100	120	120	80
PERCENT GERM.	.49++	-.12	.18	-.17	-.05	-.29++	.30++
	100	100	100	100	100	100	80
	1.00	-.03	.29++	-.17	.17	-.26++	.56++
	100	100	100	100	100	100	80
	-.03	1.00	-.31++	.48++	-.01	.29++	.49++
	100	120	120	100	120	120	80
	.29++	-.31++	1.00	.10	.03	-.49++	.48++
	100	120	120	100	120	120	80
	-.17	.48++	.10	1.00	.23+	-.07	.47++
	100	100	100	100	100	100	80
	.17	-.01	.03	.23+	1.00	-.15	.25+
	100	120	120	100	120	120	80
	-.26++	.29++	-.49++	-.07	-.15	1.00	-.61++
	100	120	120	100	120	120	80
	.56++	.49++	.48++	.47++	.25+	-.61++	1.00
	80	80	80	80	80	80	80

TABLE 39 COMBINED ANALYSIS FOR ZONE III, ISVEX 1978

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
HARDEE LS	2883.78	65.40	133.40	3.13	2.42	78.33	76.67	59.75	2.17
IMPROVED PELICAN	2619.69	57.35	118.20	3.44	2.58	72.25	80.42	61.27	1.92
JUPITER	2584.68	64.55	133.20	3.44	3.08	73.58	84.58	72.16	2.33
SJ 2	2496.75	56.45	122.10	3.38	2.50	85.00	75.42	62.24	2.58
CH 3	2355.89	53.70	127.00	3.25	2.33	76.75	77.08	76.48	2.75
ORBA	2287.12	59.05	115.10	2.81	2.33	78.42	75.83	67.69	3.00
UFV 1	2274.62	54.25	121.60	3.19	2.42	77.42	79.58	35.25	1.17
IAC 2	2252.12	54.25	123.10	3.38	2.17	78.92	86.25	63.48	2.58
BOSSIER	2224.61	52.55	110.15	3.00	2.33	82.25	72.92	43.31	1.67
WILLIAMS	1946.22	44.05	100.50	2.81	2.42	82.25	90.83	34.67	1.33
GRAND MEAN	2392.55	56.16	120.44	3.18	2.46	78.52	79.96	57.63	2.15
NUMBER EXPERIMENTS CONTRIBUTING	5	5	5	4	3	3	3	5	3
STANDARD ERROR OF VARIETY MEAN	235.31	2.03	2.25	.17	.16	8.39	7.75	3.09	.50
COEFFICIENT OF VARIATION	43.98	16.16	8.36	20.89	22.45	37.04	33.56	24.02	80.29
5% LSD VARIETY MEANS (****=NS)	*****	5.82	6.46	*****	*****	*****	*****	8.88	*****

CORRELATIONS AND NUMBER OF OBSERVATIONS									
	YIELD	KG/HA	+	-	PROB=.05	++	-	PROB=.01	
DAYS TO FLOWER	1.00	200	-.12	-.07	-.31	120	-.20	120	.04
DAYS TO MATURITY	-.13	200	.95	.57	.83	120	.13	25	120
NODULE ABUND 1	-.12	200	1.00	.61	.83	120	.09	.11	-.31
NODULE ABUND 2	-.07	200	.61	1.00	.78	120	-.27	120	-.57
NODULE ACT. 1	-.31	120	.83	.78	1.00	120	-.05	120	-.43
NODULE ACT. 2	-.20	120	.09	.27	-.05	120	1.00	.05	120
PLANT HEIGHT	.34	200	.11	-.17	-.16	120	.05	1.00	.58
LODGING	.04	200	-.31	-.57	-.43	120	.14	.58	1.00
SHATTER	-.18	120	-.20	-.24	-.22	120	-.02	.14	.43
PLANTS HARVEST	-.03	200	-.49	-.37	-.48	120	.08	-.01	.28
PODS PER PLANT	.45	200	.12	.12	-.54	120	.05	.03	.51
POD HEIGHT	.22	200	-.28	-.35	-.23	120	.07	-.17	.73
100 SEED WEIGHT	.01	120	.22	.35	.33	120	-.12	-.14	-.37
QUALITY OF SEED	-.34	160	.32	.26	.44	120	-.16	.15	-.19
PERCENT GERM.	-.08	120	-.14	-.05	-.07	80	.05	.01	.18
			120	120	80		80	120	80

TABLE 39 COMBINED ANALYSIS FOR ZONE III, ISVEX 1978

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
HARDEE LS	1.00	175.25	42.73	14.78	16.54	2.00	91.17
IMPROVED PELICAN	1.00	239.15	31.83	13.10	15.57	1.63	99.58
JUPITER	1.00	184.50	31.81	21.45	20.47	2.88	96.75
SJ 2	1.00	195.10	35.54	14.28	14.03	1.94	99.25
CH 3	1.00	205.20	34.07	14.90	14.71	2.38	98.83
ORRA	2.17	218.15	30.64	15.05	15.06	2.13	99.25
UFV 1	1.00	176.65	31.88	7.62	18.54	2.19	99.17
IAC 2	1.00	223.25	31.16	11.53	19.33	2.50	98.67
ROSSIER	1.00	200.30	25.23	12.13	16.40	2.13	98.08
WILLIAMS	1.00	234.60	18.15	5.77	20.98	2.25	97.08
GRAND MEAN	1.12	205.22	31.30	13.06	17.16	2.20	97.78
NUMBER EXPERIMENTS CONTRIBUTING	3	5	5	3	4	4	3
STANDARD ERROR OF VARIETY MEAN	.29	14.99	2.64	1.41	1.14	.32	1.87
COEFFICIENT OF VARIATION	91.03%	32.66%	37.67%	37.40%	26.53%	58.89%	6.61%
5% LSD VARIETY MEANS (****=NS)	*****	42.99	7.56	4.19	3.30	*****	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)							
YIELD	KG/HA						
DAYS TO FLOWER		-.18+	.45++	.22+	.01	-.34++	-.08
DAYS TO MATURITY		-.18+	-.13	-.27++	.19+	.25++	-.27++
NODULE	ABUND 1	-.20+	-.12	-.28++	.22+	.32++	-.14
NODULE	ABUND 2	-.24++	-.49++	-.35++	.35++	.26++	-.05
NODULE	ACT. 1	-.22+	-.54++	-.23+	.33++	.44++	-.07
NODULE	ACT. 2	-.02	.08	.07	.12	-.16	.05
PLANT	HEIGHT	.14	.03	-.17	.14	.15	.07
LOGGING		.46++	.43++	.73++	-.26++	.02	.01
SHATTER		1.00	.51++	.48++	-.37++	-.19+	.18
PLANTS	HARVEST	.13	.13	.13	-.15	-.05	.10
PODS PER	PLANT	.13	-.28++	.23+	-.29++	-.29++	.06
POD	HEIGHT	.13	.23+	1.00	.26++	.04	-.03
100 SEED	WEIGHT	-.15	-.27++	-.30++	1.00	.35++	.01
QUALITY	OF SEED	-.05	-.29++	-.24++	.35++	1.00	-.08
PERCENT	GERM.	.10	.06	-.03	.01	-.08	1.00
		80	120	80	120	120	120

TABLE 40 COMBINED ANALYSIS FOR AFRICAN SITES IN ZONE III, ISVEX 1978

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
WILLIAMS	2315.05	41.67	333.75	3.17	2.88	87.50	73.75	38.43	1.58
MITCHELL	2296.07	41.67	332.83	3.92	3.13	93.75	79.38	44.29	1.50
RILLITO	2267.67	46.00	436.92	3.25	3.13	88.33	82.50	54.86	1.83
DAVIS	2251.44	52.33	457.67	3.42	3.25	93.33	85.00	59.37	1.83
CALLAND	2163.67	42.25	359.50	3.58	3.13	91.67	80.63	45.69	1.42
RANSOM	2139.43	42.67	421.92	3.17	3.00	84.58	80.63	36.63	1.00
CUTLER 71	2110.03	41.67	359.67	3.17	3.25	88.33	76.88	49.80	1.83
BOSSIER	2088.78	53.67	374.58	3.42	3.00	80.83	78.13	65.04	2.25
FORREST	2085.42	47.58	367.92	4.33	3.50	87.92	80.63	54.63	1.58
JAMES	2029.91	43.67	343.50	3.25	3.13	95.00	90.63	52.68	1.75
BRAGG	1661.31	44.17	415.67	4.00	3.38	95.83	91.88	46.92	1.50
IMPROVED PELICAN	1489.17	65.67	489.17	4.33	3.50	93.75	64.38	88.00	2.67
FRANKLIN	1439.36	41.42	345.17	3.92	3.38	84.17	77.50	39.79	1.00
GASOY 17	1329.10	42.75	336.17	3.67	3.13	85.42	93.75	38.66	1.33
GRAND MEAN	1976.17	46.23	383.89	3.61	3.20	89.32	81.12	51.06	1.65
NUMBER EXPERIMENTS CONTRIBUTING	4	3	3	3	2	3	2	4	3
STANDARD ERROR OF VARIETY MEAN	187.42	2.42	45.30	.29	.19	2.48	8.05	3.49	.30
COEFFICIENT OF VARIATION	37.94%	18.12%	40.88%	27.43%	16.64%	9.61%	28.07%	27.36%	62.01%
5% LSD VARIETY MEANS (****=NS)	536.12	7.03	*****	.83	*****	6.93	*****	9.99	.86
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)									
YIELD	1.00	.16+	-.46++	.23++	-.51++	.30++	-.18	.02	.21++
DAYS TO FLOWER	224	168	168	168	112	168	112	224	168
DAYS TO MATURITY	.16+	1.00	-.54++	.33++	.40++	-.12	-.11	.83++	.66++
NODULE ABUND 1	168	168	1.00	.43++	.67++	112	112	168	112
NODULE ABUND 2	.23++	.33++	.43++	1.00	.58++	.40++	.01	.07	.46++
NODULE ACT. 1	168	112	.12	.168	112	168	112	168	112
NODULE ACT. 2	-.51++	.40++	.67++	.58++	1.00	-.29++	.15	.26++	.03
PLANT HEIGHT	112	112	112	112	112	1.00	112	112	.56
LODGING	.02	.83++	-.26++	.07	.26++	.06	-.22+	1.00	.56
SHATTER	224	168	168	168	112	168	112	224	168
PLANTS HARVEST	.21++	.66++	-.57++	.46++	.03	.16	.19	.50++	1.00
PODS PER PLANT	168	112	112	112	56	.00	.56	168	168
POD HEIGHT	.00	.00	.00	.00	.00	.00	.00	.00	.00
100 SEED WEIGHT	112	56	.56	.56	0	.56	0	112	112
QUALITY OF SEED	.48++	.33++	-.64++	.68++	.13	.40++	-.10	-.02	.46++
PERCENT GERM.	224	168	168	168	112	168	112	224	168
	-.13+	.47++	-.11	-.53++	.31++	-.35++	-.19+	.42++	-.07
	224	168	168	168	112	168	112	224	168
	-.24++	.65++	.77++	.28++	.68++	.07	-.04	.61++	.60++
	168	112	112	168	112	168	112	168	112
	.21++	-.34++	.08	.47++	-.05	.23++	.26++	-.45++	.07
	224	168	168	168	112	168	112	224	168
	-.34++	-.04	.17	-.07	.18	-.08	-.03	.15	-.03
	168	112	112	.13	.56	.05	-.01	.04	.37++
	.18	.13	.10	.13	-.09	-.05	-.01	.04	.37++
	112	56	56	112	56	112	56	112	112

TABLE 40 COMBINED ANALYSIS FOR AFRICAN SITES IN ZONE III, ISVEX 1978

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
WILLIAMS	1.00	221.81	19.33	4.89	18.80	2.08	95.00
MITCHELL	1.00	191.31	25.61	5.09	17.28	2.08	90.00
KILLITO	1.00	176.81	28.71	5.69	16.63	2.08	90.25
DAVIS	1.00	203.00	28.66	7.74	17.04	1.50	90.38
CALLAND	1.00	230.06	24.69	5.25	18.84	3.00	94.87
RANSOM	1.00	218.31	22.38	5.61	18.49	2.50	93.75
CUTLER 71	1.00	233.44	25.73	5.19	18.29	3.33	93.75
BOSSIER	1.00	175.63	31.34	9.03	16.88	2.75	95.13
FORREST	1.00	179.63	27.36	5.79	18.08	2.75	75.63
JAMES	1.00	239.13	24.39	6.38	18.03	2.58	90.13
BROGG	1.00	210.63	16.78	6.66	19.75	2.67	68.75
IMPROVED PELICAN	1.00	214.81	33.66	11.79	14.96	3.25	98.13
FRANKLIN	1.00	232.56	21.40	4.43	15.62	2.42	93.25
GASOY 17	1.00	188.19	18.55	4.92	19.97	1.67	92.13
GRAND MEAN	1.00	208.24	24.90	6.32	17.76	2.48	90.08
NUMBER EXPERIMENTS CONTRIBUTING	2	4	4	3	4	3	2
STANDARD ERROR OF VARIETY MEAN	.00	11.60	2.45	1.23	.78	.55	6.33
COEFFICIENT OF VARIATION	.00%	22.28%	39.31%	67.51%	17.46%	77.54%	19.88%
5% LSD VARIETY MEANS (****=NS)	.00	33.18	7.00	3.58	2.22	*****	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)							
YIELD KG/HA	.00	.48++	-.13+	-.24++	.21++	-.34++	.18
DAYS TO FLOWER	112	224	224	168	224	168	112
DAYS TO MATURITY	.00	.33++	.47++	.65++	-.34++	-.04	.13
100 SEED WEIGHT	56	168	168	112	168	112	56
QUALITY OF SEED	.00	-.64++	-.11	.77++	.08	.17	.10
PERCENT GERMINATION	56	168	168	112	168	112	56
STANDARD ERROR	.00	.68++	-.53++	.28++	.47++	-.07	.13
COEFFICIENT OF VARIATION	56	168	168	168	168	112	112
5% LSD VARIETY MEANS (****=NS)	.00	.13	.31++	.68++	-.05	.18	-.09
NUMBER EXPERIMENTS CONTRIBUTING	0	112	112	112	112	56	56
STANDARD ERROR OF VARIETY MEAN	.00	.40++	-.35++	.07	.23++	-.08	-.05
COEFFICIENT OF VARIATION	56	168	168	168	168	112	112
5% LSD VARIETY MEANS (****=NS)	.00	-.10	-.19+	-.04	.26++	-.03	-.01
NUMBER EXPERIMENTS CONTRIBUTING	0	112	112	112	112	56	56
STANDARD ERROR OF VARIETY MEAN	.00	-.02	.42++	.61++	-.45++	.15	.04
COEFFICIENT OF VARIATION	112	224	224	168	224	168	112
5% LSD VARIETY MEANS (****=NS)	.00	.46++	-.07	.60++	.07	-.03	.37++
NUMBER EXPERIMENTS CONTRIBUTING	112	168	168	112	168	168	112
STANDARD ERROR OF VARIETY MEAN	.00	.00	.00	.00	.00	.00	.00
COEFFICIENT OF VARIATION	112	112	112	112	112	112	112
5% LSD VARIETY MEANS (****=NS)	.00	.58++	-.58++	.15	.50++	-.20+	.46++
NUMBER EXPERIMENTS CONTRIBUTING	112	224	224	168	224	168	112
STANDARD ERROR OF VARIETY MEAN	.00	.15	.07	.10	.16+	.15	.33++
COEFFICIENT OF VARIATION	112	168	168	168	168	168	112
5% LSD VARIETY MEANS (****=NS)	.00	.50++	-.67++	-.16+	1.00	-.15	.25++
NUMBER EXPERIMENTS CONTRIBUTING	112	224	224	168	224	168	112
STANDARD ERROR OF VARIETY MEAN	.00	-.20+	.15	.04	-.15	1.00	-.34++
COEFFICIENT OF VARIATION	112	168	168	168	168	168	112
5% LSD VARIETY MEANS (****=NS)	.00	.46++	-.33++	.23+	.25++	-.34++	1.00
NUMBER EXPERIMENTS CONTRIBUTING	56	112	112	112	112	112	112

TABLE 41 COMBINED ANALYSIS OF SITES IN ZONE IV FOR ISVEX 1978

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
TUNIA	2572.59	39.00	105.67	38.44	55.33	88.88	85.33	57.62	1.25
BOSSIER	2526.12	37.83	94.21	40.88	72.83	86.44	81.50	47.23	1.71
UFV 1	2223.37	40.96	103.54	43.50	62.92	79.44	80.75	36.87	1.08
HARDEE L.S.	2219.36	48.46	111.38	121.94	167.25	68.50	77.42	51.13	1.33
JUPITER	2210.34	46.38	110.67	56.50	83.08	82.94	81.00	60.60	1.58
IMPROVED PELICAN	2179.27	39.92	100.42	36.00	52.17	83.88	75.25	67.15	1.96
IAC 2	2051.63	42.75	106.00	63.69	101.67	82.44	77.42	70.07	2.42
WILLIAMS	2024.42	30.88	88.83	55.88	88.25	80.00	82.83	41.22	1.25
ORBA	1996.25	40.75	94.96	28.44	45.42	78.69	79.00	72.80	2.29
CARIBE	1824.80	43.08	115.08	38.38	66.33	84.50	80.25	72.23	2.33
SJ 2	1777.88	43.21	96.87	39.25	53.17	82.63	84.58	57.82	1.46
GRAND MEAN	2146.00	41.20	102.51	51.17	77.13	81.66	80.48	57.25	1.70
NUMBER EXPERIMENTS CONTRIBUTING	6	6	6	4	3	4	3	6	6
STANDARD ERROR OF VARIETY MEAN	216.24	1.72	3.63	25.82	34.89	3.10	3.16	3.80	.29
COEFFICIENT OF VARIATION	49.36%	20.50%	17.34%	201.86%	156.71%	15.21%	13.60%	32.51%	82.31%
5% LSD VARIETY MEANS (*****=NS)	*****	4.90	10.31	*****	*****	8.97	*****	10.79	.81

CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)									
YIELD	KG/HA	1.00	.05	-.51++	-.51++	.55++	.61++	.23++	.06
DAYS TO FLOWER	264	.264	1.00	176	132	176	132	264	.264
DAYS TO MATURITY	.05	.68++	-.02	-.02	-.18+	.05	.23++	.36++	.01
NODULE ABUND 1	.24++	1.00	1.00	-.21++	-.28++	.30++	.37++	.33++	-.05
NODULE ABUND 2	.264	.68++	.264	176	132	176	132	264	.264
NODULE ACT. 1	-.51++	-.02	-.21++	1.00	.99++	-.78++	-.79++	-.07	-.02
NODULE ACT. 2	176	176	176	176	132	176	132	176	176
PLANT HEIGHT	-.51++	-.18+	-.28++	.99++	1.00	-.83++	-.83++	-.07	.04
LODGING	132	132	132	132	132	132	132	132	132
SHATTER	.55++	.05	.30++	-.78++	-.83++	1.00	.95++	.13	.00
HARVEST	176	176	176	176	132	176	132	176	176
PODS PER PLANT	.61++	.23++	.37++	-.79++	-.83++	.95++	1.00	.06	-.10
POD HEIGHT	.23++	.36++	.33++	-.07	-.07	.13	.06	1.00	.44++
100 SEED WEIGHT	.264	.264	.264	-.02	-.04	.00	-.10	.264	1.00
QUALITY OF SEED	.06	.01	.05	-.02	.04	.00	.13	.264	.08
PERCENT GERMINATION	-.33++	.02	.05	.08	-.03	-.04	.02	.264	.08
	.264	.264	.264	176	132	176	132	.264	.264
	.23++	-.06	-.21++	-.33++	-.54++	.45++	.67++	.06	.16++
	.264	.264	.264	176	132	176	132	.264	.264
	.01	-.04	.11	.19+	.49++	-.16+	-.43++	.32++	.07
	.264	.264	.264	176	132	176	132	.264	.264
	.30++	.51++	.48++	-.34++	-.51++	.48++	.62++	.51++	.23++
	.18++	.176	.176	176	132	176	132	.264	.176
	.220	.220	.220	132	132	132	132	.220	.220
	-.40++	-.04	.01	.26++	.25++	-.31++	-.31++	.13	-.06
	.176	.176	.176	132	132	132	132	.176	.176
	-.08	.24++	-.32++	.32++	.31++	-.34++	-.35++	.01	.24++
	132	132	132	88	88	88	88	132	132

TABLE 41 COMBINED ANALYSIS OF SITES IN ZONE IV FOR ISVEX 1978

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
TUNIA	1.46	155.71	45.13	9.49	17.25	2.31	65.25
BOSSIER	1.17	179.29	39.13	9.26	15.56	1.75	55.75
UFV 1	1.08	152.83	38.96	7.18	15.09	1.94	69.83
HARDEE L.S.	1.08	134.17	53.38	9.20	13.92	2.19	60.25
JUPITER	1.13	150.04	46.63	9.73	14.86	1.88	67.83
IMPROVED PELICAN	1.50	193.92	41.23	10.56	13.31	1.94	78.17
IAC 2	1.29	160.75	52.99	11.59	14.77	1.94	63.25
WILLIAMS	1.42	213.04	27.83	6.43	17.33	2.00	43.83
ORBA	1.92	162.46	43.81	10.46	12.74	1.88	82.08
CARIBE	1.04	152.79	57.89	10.18	11.65	2.00	52.75
SJ 2	1.38	146.21	65.71	9.86	12.82	2.31	80.67
GRAND MEAN	1.31	163.75	46.61	9.45	14.48	2.01	65.42
NUMBER EXPERIMENTS CONTRIBUTING	6	6	6	4	5	4	3
STANDARD ERROR OF VARIETY MEAN	.16	9.78	6.29	.77	.63	.31	9.89
COEFFICIENT OF VARIATION	59.84%	29.25%	66.14%	32.66%	19.41%	61.66%	52.38%
5% LSD VARIETY MEANS (****=NS)	.46	27.78	17.87	2.23	1.80	*****	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)							
YIELD	KG/HA	.23++	.01	.30++	.18++	-.40++	-.08
DAYS TO FLOWER		264	264	176	220	176	132
DAYS TO MATURITY		.02	-.04	.51++	-.04	-.04	.24++
NODULE ABUND 1		264	264	176	220	176	132
NODULE ABUND 2		.05	.11	.48++	.16+	.01	-.33++
NODULE ACT. 1		264	264	176	220	176	132
NODULE ACT. 2		.08	.19+	-.34++	-.34++	.26++	.33++
PLANT		176	176	176	132	132	88
LOADING		132	.54++	-.51++	-.37++	.25++	.31++
SHATTER		.03	132	132	132	132	88
PLANTS		176	.45++	.48++	.42++	-.31++	-.34++
PODS PER PLANT		.02	.67++	.62++	.43++	-.31++	-.35++
POD HEIGHT		132	.06	.32++	.41++	.13	.01
100 SEED WEIGHT		264	.16++	.23++	-.23++	-.06	.24++
QUALITY OF SEED		264	.12	176	220	176	132
PERCENT GERM.		1.00	.04	.10	-.08	.43++	-.13
		.12	.46++	.44++	.05	176	132
		264	264	176	220	176	132
		.04	1.00	.27++	.49++	.43++	.03
		264	.44++	1.00	.11	176	132
		176	.05	.49++	.16	.46++	.16
		.08	.43++	.32++	.46++	1.00	-.27++
		220	.16+	132	176	176	132
		.13	.17	-.28++	.16	176	132
		132	132	88	132	132	132

TABLE 42 COMBINED ANALYSIS OF SITES IN ZONE VI FOR ISVEX 1978

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
FORREST	3035.04	37.40	108.44	3.63	3.25	68.13	71.88	52.54	1.44
DAVIS	2934.62	42.95	111.88	4.00	2.50	83.13	83.13	54.83	1.50
BOSSIER	2797.76	44.90	115.38	3.88	2.25	71.88	68.13	59.78	2.63
RANSOM	2791.38	33.50	104.50	3.75	2.63	72.50	78.13	37.60	1.06
GASOY 17	2683.10	32.80	102.31	3.88	2.75	78.75	79.38	37.57	1.13
MITCHELL	2616.96	28.70	95.94	3.88	2.75	67.50	61.88	48.81	1.31
CRAWFORD	2593.25	29.75	97.94	3.75	2.75	71.88	77.50	49.96	1.13
JAMES	2469.99	30.65	100.38	3.50	2.25	83.75	78.75	46.70	1.31
CUTLER 71	2433.09	29.60	96.38	3.63	2.50	76.88	75.00	48.64	1.13
CALLAND	2262.03	27.95	99.88	3.50	2.88	81.88	81.25	42.92	1.25
WILLIAMS	2157.91	28.40	92.75	3.63	2.50	67.50	55.63	38.90	1.00
IMP. PELICAN	2123.77	50.55	119.56	3.88	2.38	71.25	81.88	81.77	2.69
FRANKLIN	2010.18	28.40	92.88	3.63	3.00	71.88	66.25	42.30	1.06
GRAND MEAN	2531.47	34.27	102.94	3.73	2.64	74.33	73.80	49.41	1.43
NUMBER EXPERIMENTS CONTRIBUTING	5	5	4	2	2	2	2	5	4
STANDARD ERROR OF VARIETY MEAN	142.25	1.80	3.09	.14	.41	5.72	7.05	4.72	.33
COEFFICIENT OF VARIATION	25.13%	23.49%	12.00%	10.94%	44.01%	21.77%	27.00%	42.75%	93.14%
5% LSD VARIETY MEANS (****=NS)	404.50	5.12	8.86	*****	*****	*****	*****	13.43	.96
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)									
YIELD	1.00	.46++	.44++	-.02	.06	.24+	.24+	.39++	.06
DAYS TO FLOWER	.260	.260	.208	.104	.104	.104	.104	.260	.208
DAYS TO MATURITY	.46++	1.00	.87++	.41++	-.24+	-.47++	-.29++	.71++	.63++
NODULE ABUND 1	.208	.87++	1.00	.48++	-.34++	-.62++	-.45++	.72++	.54++
NODULE ABUND 2	-.02	.41++	.48++	1.00	-.31++	-.52++	-.48++	.208	.208
NODULE ACT. 1	.06	-.24+	-.34++	-.31++	1.00	.42++	.40++	.24+	.104
NODULE ACT. 2	.104	.104	.104	.104	.104	.104	.104	.104	.104
PLANT HEIGHT	.39++	.71++	.72++	-.48++	.40++	.80++	1.00	-.31++	-.25+
LOGGING	.06	.63++	.208	.104	.104	.104	.104	.104	-.15
SHATTER	.08	.47++	.208	.24+	-.10	-.25+	-.15	1.00	.64++
PLANTS HARVEST	.104	.104	.104	.08	.07	.09	.104	.260	.208
PODS PER PLANT	.31++	.05	-.41++	-.61++	.47++	.52	.52	.43++	.104
POD HEIGHT	.16+	.25++	.62++	.26++	-.10	-.29++	-.15	-.02	-.20++
100 SEED WEIGHT	.260	.260	.208	.104	.104	.104	.104	.260	.208
QUALITY OF SEED	-.28++	-.07	-.32++	-.40++	.42++	.66++	.69++	-.00	.15+
PERCENT GERM.	.61++	.13+	.208	.104	-.04	.39++	.29++	-.02	-.39++
	.260	.260	.208	.104	.104	.104	.104	.260	.208
	.07	.10	.39++	-.41++	.43++	.34++	.27++	-.01	-.00
	.47++	.31++	.208	.104	.104	.104	.104	.260	.208
	.156	.156	.104	-.04	-.04	-.17	-.17	.27++	-.20+
				.104	.104	.104	.104	.156	.104

TABLE 42 COMBINED ANALYSIS OF SITES IN ZONE VI FOR ISVEX 1978

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
FORREST	1.00	213.75	26.73	9.06	17.16	3.00	80.08
DAVIS	1.13	228.15	25.11	8.34	19.13	2.30	79.50
BOSSIER	1.13	207.55	25.05	10.55	17.86	2.70	86.92
RANSOM	1.00	230.35	20.32	7.38	20.06	2.75	85.67
GASOY 17	1.13	242.50	20.33	6.63	19.22	2.20	87.92
MITCHELL	1.00	216.15	20.03	6.96	19.30	2.55	85.50
CRAWFORD	1.00	207.10	21.99	6.37	20.20	2.25	92.83
JAMES	1.25	249.60	15.85	8.88	20.28	2.20	87.25
CUTLER 71	1.00	245.25	18.31	7.91	21.07	2.65	82.83
CALLAND	1.38	241.10	14.54	8.84	20.96	2.75	73.67
WILLIAMS	1.00	261.10	15.09	7.46	19.88	2.70	90.83
IMP. PELICAN	1.50	246.25	30.86	12.74	15.14	2.90	84.25
FRANKLIN	1.00	226.60	27.62	6.38	18.85	2.75	89.25
GRAND MEAN	1.12	231.96	21.68	8.27	19.16	2.59	85.12
NUMBER EXPERIMENTS CONTRIBUTING	2	5	5	5	5	5	3
STANDARD ERROR OF VARIETY MEAN	.17	10.69	3.69	.73	.45	.26	5.58
COEFFICIENT OF VARIATION	41.86%	20.62%	76.07%	39.63%	10.45%	44.31%	22.73%
5% LSD VARIETY MEANS (*****NS)	*****	30.41	*****	2.08	1.27	*****	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)							
YIELD KG/HA	.08	.31++	.16+	-.28++	.61++	.07	.47++
DAYS TO FLOWER	.47++	.05	.25++	-.07	.13+	.260	.156
DAYS TO MATURITY	.50++	.41++	.62++	-.32++	.16+	.260	.156
NODULE AROUND 1	.08	.208	.208	.208	.208	.208	-.04
NODULE AROUND 2	.52	.104	.104	-.40++	-.28++	-.41++	-.04
NODULE ACT. 1	.07	.47++	-.10	.42++	-.04	.43++	-.04
NODULE ACT. 2	.52	.104	.104	.104	.104	.104	.17
PLANT HEIGHT	.43++	.76++	-.29++	.66++	.39++	.34++	-.17
LOADING	.32++	.72++	-.15	.69++	.29++	.104	.17
SHATTER	1.00	.22+	.44++	-.15	.12	.36++	-.23
PLANTS HARVEST	-.22+	1.00	-.27++	.30++	.42++	-.08	.35++
PODS PER PLANT	.44++	.260	1.00	-.10	.06	.11	.156
POD HEIGHT	-.15	.30++	-.10	1.00	.260	.260	.156
100 SEED WEIGHT	-.12	.42++	-.08	-.34++	1.00	-.09	.53++
QUALITY OF SEED	.36++	.260	.06	.260	.260	1.00	-.25++
PERCENT GERM.	-.23	.35++	.11	-.36++	.53++	-.25++	1.00
	.52	.156	.156	.156	.156	.156	.156

TABLE 43 COMBINED ANALYSIS FOR ZONE VII, ISVEX 1978

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
RILLITO	2474.09	45.97	128.06	7.00	66.46	88.75	66.12	80.27	1.69
RANSOM	2150.50	44.00	132.22	7.31	91.63	88.75	60.62	50.22	1.06
DAVIS	2119.33	51.41	131.44	5.81	79.96	86.25	63.40	60.26	1.28
IMPROVED PELICAN	2058.17	67.66	138.59	5.94	69.63	85.83	305.49	108.88	2.38
GASOY 17	2015.27	46.88	135.03	5.69	43.25	81.67	63.13	57.58	1.25
BOSSIER	1982.19	50.03	139.47	7.81	44.88	76.67	309.60	68.81	1.53
MITCHELL	1831.21	32.13	106.16	6.00	58.50	84.58	64.56	57.66	1.06
CALLAND	1661.47	29.19	102.25	6.00	39.38	83.75	61.38	54.61	1.19
CUTLER 71	1579.25	31.25	101.25	6.81	41.17	82.50	57.21	53.19	1.19
FRANKLIN	1566.57	30.13	101.53	6.06	40.21	85.00	55.25	53.88	1.06
WILLIAMS	1559.55	30.13	100.53	8.25	51.21	86.67	62.55	50.16	1.13
FORREST	1503.93	44.88	123.44	5.75	45.75	82.92	56.10	51.11	1.09
GRAND MEAN	1875.13	41.97	120.00	6.54	56.00	84.44	102.12	62.22	1.32
NUMBER EXPERIMENTS CONTRIBUTING	8	8	8	4	6	3	4	8	8
STANDARD ERROR OF VARIETY MEAN	176.40	2.99	4.00	.95	17.07	3.39	101.88	4.19	.17
COEFFICIENT OF VARIATION	53.22%	40.32%	18.86%	58.02%	149.37%	13.93%	399.07%	38.11%	72.50%
5% LSD VARIETY MEANS (*****=NS)	496.76	8.42	11.27	*****	*****	*****	*****	11.80	.48
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)									
YIELD	1.00	.32++	.31++	.29++	.50++	.43++	.00	.53++	.26++
DAYS TO FLOWER	.384	1.00	.74++	.41++	.288	.144	.192	.384	.384
DAYS TO MATURITY	.384	.384	1.00	.37++	.288	.144	.192	.384	.57++
NODULE AROUND 1	.384	.384	.384	1.00	.86++	.37++	.192	.384	.40++
NODULE AROUND 2	.192	.192	.192	.192	1.00	.38++	.144	.192	.03
NODULE ACT. 1	.288	.288	.288	.192	.288	.144	.192	.288	.39++
NODULE ACT. 2	.144	.144	.144	.144	.144	.144	.144	.144	.00
PLANT	.00	.23++	.21++	.45++	.11	.48++	1.00	.16+	.30++
HEIGHT	.53++	.72++	.63++	.25++	.65++	.05	.16+	.192	.61++
LODGING	.384	.384	.384	.192	.288	.144	.192	.384	.384
SHATTER	.384	.384	.384	.192	.288	.144	.192	.384	1.00
PLANTS	.336	.336	.336	.144	.240	.06	.03	.384	.11+
HARVEST	.07	.09	.06	.45++	.15++	.24++	.01	.336	.07
PODS PER PLANT	.384	.384	.384	.192	.288	.144	.192	.384	.384
FOU	.336	.336	.336	.144	.240	.06	.01	.336	.47++
HEIGHT	.31++	.44++	.60++	.12	.06	.38++	.192	.336	.336
100 SEED	.336	.336	.336	.192	.288	.144	.192	.336	.336
WEIGHT	.10	.14+	.37++	.06	.00	.50++	.01	.336	.06
QUALITY OF SEED	.336	.336	.336	.144	.240	.06	.01	.336	.336
PERCENT	.336	.336	.336	.144	.240	.06	.01	.336	.336
GERM.	.02	.32++	.25++	.31++	.44++	.33++	.49++	.19++	.240
	240	240	240	144	192	96	96	240	240

TABLE 43 COMBINED ANALYSIS FOR ZONE VII, ISVEX 1978

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
RILLITO	1.00	152.53	53.09	11.74	15.33	2.07	76.65
RANSOM	1.00	178.34	34.38	10.00	17.95	2.11	72.40
DAVIS	1.18	174.44	38.99	10.44	16.91	2.04	71.95
IMPROVED PELICAN	1.25	178.09	57.81	14.64	13.03	1.82	77.60
GASDY 17	1.11	174.47	48.02	9.91	16.81	2.50	80.10
ROSSIER	1.29	162.28	47.99	12.34	15.79	2.36	78.50
MITCHELL	1.18	164.69	31.52	9.20	16.81	2.96	50.50
CALLAND	1.21	195.44	28.11	9.24	17.09	3.14	62.65
CUTLER 71	1.18	182.31	27.27	9.65	17.30	2.57	58.20
FRANKLIN	1.18	180.34	26.33	9.24	16.24	2.71	50.05
WILLIAMS	1.29	187.78	26.21	7.76	16.23	2.39	63.50
FORREST	1.00	160.66	38.30	9.13	15.40	3.04	70.60
GRAND MEAN	1.15	174.28	38.17	10.27	16.24	2.48	67.73
NUMBER EXPERIMENTS CONTRIBUTING	7	8	7	7	7	7	5
STANDARD ERROR OF VARIETY MEAN	.13	7.81	3.59	.67	.64	.35	6.89
COEFFICIENT OF VARIATION	57.41%	25.36%	49.72%	34.68%	20.75%	74.85%	45.47%
5% LSD VARIETY MEANS (*****=NS)	*****	22.01	10.13	1.90	1.80	*****	19.63
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)							
YIELD	KG/HA						
DAYS TO FLOWER							
DAYS TO MATURITY							
NODULE AROUND 1							
NODULE AROUND 2							
NODULE ACT. 1							
NODULE ACT. 2							
PLANT							
LONGING							
SHATTER							
PLANTS							
PODS PER PLANT							
POD							
100 SEED							
QUALITY OF SEED							
PERCENT GERM.							

TABLE 44 COMBINED ANALYSIS OF GROUP A SITES IN ZONE X, ISVEX 1972

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEULE ABUND 1	NODEULE ABUND 2	NODEULE ACT. 1	NODEULE ACT. 2	PLANT HEIGHT	LODGING
MITCHELL	2622.94	48.71	142.21	4.25	2.75	61.88	67.88	94.40	2.00
CALLAND	2512.69	40.29	134.21	2.75	1.00	73.63	97.63	95.05	1.88
RANSOM	2356.72	73.58	179.04	2.75	2.00	76.75	60.50	98.29	2.25
WILLIAMS	2321.04	41.96	142.67	2.00	1.00	72.50	65.25	83.65	1.19
FRANKLIN	2269.07	40.33	131.50	3.50	1.00	66.63	92.88	95.18	1.75
CUTLER 71	2146.70	40.67	138.00	3.00	1.00	75.38	80.88	93.23	2.13
BOSSIER	2140.83	80.04	179.54	2.75	1.75	82.50	59.25	105.03	2.75
FORREST	2140.05	65.67	156.21	2.50	1.50	61.88	73.00	93.79	1.88
DAVIS	2092.76	76.71	175.54	4.00	1.50	73.38	71.38	103.82	2.00
RILLITO	1887.85	75.58	175.54	2.75	2.00	70.63	90.63	113.17	2.69
GRAND MEAN	2249.07	58.35	155.25	3.03	1.55	71.51	75.93	97.56	2.05
NUMBER EXPERIMENTS CONTRIBUTING	6	6	6	1	1	2	2	5	4
STANDARD ERROR OF VARIETY MEAN	251.40	2.76	5.41	.57	.46	11.49	12.67	5.03	.36
COEFFICIENT OF VARIATION	54.76%	23.14%	17.08%	37.68%	59.03%	45.46%	47.26%	23.06%	70.80%
5% LSD VARIETY MEANS (*****=NS)	*****	7.85	15.42	*****	*****	*****	*****	14.43	*****

CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05; ++ - PROB=.01)									
YIELD	KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEULE ABUND 1	NODEULE ABUND 2	NODEULE ACT. 1	NODEULE ACT. 2	PLANT HEIGHT	LODGING
YIELD	1.00	-.01	.06	-.01	-.05	-.46++	-.47++	.32++	.19+
DAYS TO FLOWER	240	1.00	.86++	.09	.40++	.33++	.12	.37++	.32++
DAYS TO MATURITY	240	.86++	1.00	.17	.39+	.23+	-.16	.41++	.160
NODEULE ABUND 1	240	.09	.17	1.00	.37+	.80	.80	.200	.160
NODEULE ABUND 2	40	.40++	.39+	.37+	1.00	.11	-.32+	.40	.40
NODEULE ACT. 1	40	.33++	.23+	-.09	.11	1.00	.39++	.22	.34+
NODEULE ACT. 2	80	.12	.16	-.18	-.32+	.39++	1.00	-.27+	-.16
PLANT HEIGHT	32++	.37++	.41++	.12	.22	-.27+	-.29++	1.00	.55++
LODGING	19+	.32++	.44++	.16	.34+	-.16	-.01	.55++	1.00
SHATTER	160	.30++	.37++	-.05	-.08	.36++	.44++	.25++	.28++
PLANTS	160	.160	.160	.40	.40	.80	.80	.160	.160
HARVEST	160	.05	.05	-.09	-.19	.56++	.59++	-.04	-.10
PODS PER PLANT	200	.20++	.23++	.03	.01	-.31++	-.35++	.69++	.39++
POD HEIGHT	200	.200	.200	.00	.00	-.08	.20	.160	.160
100 SEED WEIGHT	40	.40	.40	.00	.00	.02	.40	.40	.40
QUALITY OF SEED	160	.160	.160	.03	.12	.80	.80	.52++	.22++
PERCENT GERM.	200	-.30++	-.26++	-.01	-.15	.45++	.43++	-.29++	-.20++
	200	.34++	.19+	.40	.40	.80	.80	.160	.160
	120	.120	.120	.00	.00	.15	-.17	.42++	.25++
						.40	.40	.120	.120

TABLE 44 COMBINED ANALYSIS OF GROUP A SITES IN ZONE X, ISVEX 1978

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
MITCHELL	1.44	119.80	36.05	12.68	17.66	3.50	69.50
CALLAND	1.63	170.40	26.27	10.35	17.16	3.65	56.08
RANSOM	1.38	122.75	26.78	9.18	17.50	2.55	73.08
WILLIAMS	1.31	157.25	23.10	7.03	17.43	3.55	53.83
FRANKLIN	1.63	158.90	25.75	12.43	16.79	3.70	51.17
CUTLER 71	1.44	130.45	31.47	14.90	17.47	3.75	57.08
BOSSIER	1.56	114.80	39.48	11.05	17.08	1.75	68.00
FORREST	1.31	125.55	29.97	7.73	15.63	2.85	76.00
DAVIS	1.38	131.75	30.48	6.53	16.14	2.50	60.50
KILLITO	1.44	98.75	31.55	8.90	14.31	2.40	81.17
GRAND MEAN	1.45	133.04	30.09	10.08	16.72	2.92	64.64
NUMBER EXPERIMENTS CONTRIBUTING	4	5	5	1	4	5	3
STANDARD ERROR OF VARIETY MEAN	.16	11.44	4.79	1.24	1.01	.42	13.49
COEFFICIENT OF VARIATION	45.45%	38.44%	71.14%	24.60%	24.11%	64.86%	72.28%
5% LSD VARIETY MEANS (****=NS)	*****	32.80	*****	3.60	*****	1.21	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)							
YIELD KG/HA	-.18+	-.03	.65++	-.21	.59++	-.55++	.32++
DAYS TO FLOWER	160	200	200	40	160	200	120
DAYS TO MATURITY	.30++	.05	.20++	-.34+	.07	-.30++	.34++
NODULE AROUND 1	160	200	200	40	160	200	120
NODULE AROUND 2	.37++	.05	.23++	-.47++	.15	-.26++	.19+
NODULE ACT. 1	160	200	200	40	160	200	120
NODULE ACT. 2	160	200	.03	.00	.03	-.01	.00
PLANT	-.05	40	40	0	40	40	0
LOGGING	40	40	.01	.00	.12	-.15	.00
SHATTER	40	40	.01	.00	.40	.40	0
PLANTS	.36++	.56++	-.31++	-.08	.02	.45++	.15
PODS PER	80	80	80	40	80	40	40
POD	.44++	.59++	-.35++	.20	-.12	.43++	-.17
100 SEED	80	80	80	40	80	80	40
QUALITY OF SEED	.25++	-.04	.69++	-.14	.52++	-.29++	.42++
PERCENT	160	160	160	40	160	160	120
GERM.	.28++	-.10	.39++	.28	.22++	-.20++	.25++
SHATTER	160	160	160	40	160	160	120
PLANTS	1.00	.48++	.08	.51++	.29++	.24++	.01
PODS PER	160	160	160	40	160	160	120
POD	.48++	1.00	-.08	.19	.22++	.31++	-.27++
100 SEED	160	200	200	40	160	200	120
QUALITY OF SEED	.08	-.08	1.00	-.04	.53++	-.36++	.36++
PERCENT	160	200	200	40	160	200	120
GERM.	.51++	.19	-.04	1.00	.07	.42++	-.26
SHATTER	40	40	40	.07	.40	40	40
PLANTS	.29++	.22++	.53++	.07	1.00	-.22++	.21+
PODS PER	160	160	160	40	160	160	120
POD	.24++	.31++	-.36++	.42++	-.22++	1.00	-.27++
100 SEED	160	200	200	40	160	200	120
QUALITY OF SEED	.01	-.27++	.36++	-.26	.21+	-.27++	1.00
PERCENT	120	120	120	40	120	120	120

TABLE 45 COMBINED ANALYSIS FOR GROUP B IN ZONE X, ISVEX 1978

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
ELF							
CALLAND	1.35	186.25	25.21	6.51	15.99	3.75	94.56
COLUMBUS	1.25	217.33	23.17	11.89	16.30	3.67	93.56
FRANKLIN	1.15	210.50	27.83	12.54	15.63	2.83	94.31
UNION	1.25	195.96	25.54	11.15	15.56	3.67	92.75
MITCHELL	1.15	200.21	22.84	10.61	17.12	3.75	96.25
WILLIAMS	1.50	186.33	29.71	9.67	15.35	3.50	94.75
CRAWFORD	1.15	206.25	21.55	10.46	16.65	3.58	93.56
HARCOR	1.30	198.92	27.92	6.73	14.42	3.33	95.69
HODGSON	1.50	201.46	28.65	5.28	13.58	3.92	81.31
EVANS	1.40	203.50	25.83	7.61	14.54	3.67	84.63
STEELE	1.35	183.67	27.92	11.59	14.20	3.92	78.69
SWIFT	1.70	223.50	22.83	7.01	12.62	4.25	81.00
ALTONA	2.05	207.54	21.18	7.41	13.88	4.17	63.75
GRAND MEAN	1.39	200.76	25.25	9.01	15.11	3.69	88.39
NUMBER EXPERIMENTS CONTRIBUTING	5	6	7	4	6	3	4
STANDARD ERROR OF VARIETY MEAN	.22	9.82	1.69	.96	.67	.40	5.67
COEFFICIENT OF VARIATION	70.61%	23.97%	35.32%	42.66%	21.85%	37.98%	25.76%
5% LSD VARIETY MEANS (*****NS)	*****	*****	4.74	2.75	1.90	*****	16.28
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)							
YIELD	KG/HA						
DAYS TO FLOWER							
DAYS TO MATURITY							
NODULE AROUND 1							
NODULE AROUND 2							
NODULE ACT. 1							
NODULE ACT. 2							
PLANT							
LODGING							
SHATTER							
PLANTS							
PODS PER PLANT							
POD							
100 SEED							
QUALITY OF SEED							
PERCENT GERM.							

TABLE 46 COMBINED ANALYSIS FOR AFRICAN SITES IN ZONE X, ISVEX 1978

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
MITCHELL	2623.47	40.30	118.75	.00	3.50	25.00	61.00	97.14	1.83
CALLAND	2401.35	39.35	118.95	.00	3.75	47.25	85.13	94.91	1.92
FRANKLIN	2229.54	39.45	120.70	.00	3.50	33.25	77.25	96.24	1.75
CUTLER 71	2158.83	39.40	119.00	.00	3.00	50.75	80.25	95.44	1.92
WILLIAMS	2069.55	39.15	124.50	.00	3.50	50.00	50.25	83.80	1.17
GRAND MEAN	2296.55	39.53	120.38	.00	3.45	41.25	70.78	93.51	1.72
NUMBER EXPERIMENTS CONTRIBUTING	5	5	5	0	1	1	2	4	3
STANDARD ERROR OF VARIETY MEAN	127.39	.68	5.58	.00	.20	26.43	13.96	1.78	.32
COEFFICIENT OF VARIATION	24.81%	7.66%	20.72%	.00%	11.83%	128.15%	55.78%	7.62%	63.59%
5% LSD VARIETY MEANS (*****NS)	*****	*****	*****	.00	*****	*****	*****	5.04	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05, ++ - PROB=.01)									
YIELD	1.00	.29++	.12	.00	-.04	.10	-.27	.58++	.16
DAYS TO FLOWER	100	100	100	0	20	20	40	80	60
DAYS TO MATURITY	.29++	1.00	.56++	.00	.19	.00	.04	.76++	.60
NODULE ABUND 1	.12	.56++	1.00	.00	.22	.10	.39+	.48++	.60++
NODULE ABUND 2	100	100	100	0	20	20	40	80	60
NODULE ACT. 1	.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ACT. 2	0	0	0	0	0	0	0	0	0
PLANT HEIGHT	-.04	.19	.22	.00	1.00	.00	-.72++	-.02	.00
LODGING	20	20	20	0	20	0	20	20	0
SHATTER	.10	.00	.10	.00	.00	1.00	-.05	.00	.15
PLANTS HARVEST	-.27	.04	-.39+	.00	-.72++	-.05	1.00	-.02	.36
FODS PER PLANT	40	40	40	0	20	20	40	40	20
POD SEED WEIGHT	.58++	.06	.48++	.00	-.02	.00	-.02	1.00	.55++
QUALITY OF SEED	.16	.76++	.60++	.00	.00	.15	.36	.65++	.60
PERCENT GERMINATION	.08	.60++	.44++	.00	.00	-.10	.51+	.52++	.62++
100 SEED WEIGHT	.04	.30++	-.35++	.00	-.13	-.22	.28	-.61++	-.20
QUALITY OF SEED	100	100	100	0	20	20	40	80	60
PERCENT GERMINATION	.57++	-.08	.07	.00	.24	-.17	.40	.51++	.11
100 SEED WEIGHT	100	100	100	0	20	20	40	80	60
QUALITY OF SEED	-.09	-.06	-.25	.00	.00	-.18	.27	.07	.11
PERCENT GERMINATION	.40	.52++	.46++	.00	.00	.16	.20	.40	.40
100 SEED WEIGHT	.74++	.60	.60	.00	.00	.29+	.65++	.60	.60
QUALITY OF SEED	.60	.60	.60	.00	.00	.20	.20	.60	.60
PERCENT GERMINATION	-.82++	-.47++	-.28+	.00	.00	-.10	.45+	-.54++	-.30+
100 SEED WEIGHT	80	80	80	0	0	20	20	60	60
PERCENT GERMINATION	-.60++	-.94++	-.82++	.00	.00	.19	-.00	-.82++	-.66++
100 SEED WEIGHT	60	60	60	0	0	20	20	60	60

TABLE 46 COMBINED ANALYSIS FOR AFRICAN SITES IN ZONE X, ISVEX 1978

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
MITCHELL	1.17	133.75	39.50	11.79	16.82	3.06	72.42
CALLAND	1.42	177.25	30.55	11.66	18.61	3.38	83.00
FRANKLIN	1.50	162.60	27.15	11.83	16.76	2.94	78.42
CUTLER 71	1.17	154.20	29.49	13.83	18.97	3.06	79.58
WILLIAMS	1.00	164.40	25.66	9.14	16.97	2.63	80.25
GRAND MEAN	1.25	158.44	30.47	11.65	17.62	3.01	78.73
NUMBER EXPERIMENTS CONTRIBUTING	3	5	5	2	3	4	3
STANDARD ERROR OF VARIETY MEAN	.20	8.92	2.83	1.44	.58	.19	3.04
COEFFICIENT OF VARIATION	56.57%	25.18%	41.47%	35.06%	11.35%	25.76%	13.36%
5% LSD VARIETY MEANS (****=NS) *****	*****	26.74	7.96	*****	*****	*****	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS							
(+ - PROB=.05, ++ - PROB=.01)							
YIELD	.08	.04	.57++	-.09	.74++	-.82++	-.60++
DAYS TO FLOWER	.60++	100	100	.40	.60	.80	.60
DAYS TO MATURITY	.44++	.30++	-.08	-.06	.52++	-.47++	-.94++
NODULE AROUND 1	.00	100	100	.40	.60	.80	.60
NODULE AROUND 2	.00	100	.07	-.25	.46++	-.28+	-.82++
NODULE ACT. 1	.00	100	100	.40	.60	.80	.60
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00
PLANT	.00	0	0	0	0	0	0
LODGING	.00	-.13	.24	.00	.00	.00	.00
SHATTER	.00	20	20	0	0	0	0
HARVEST	-.10	-.22	-.17	-.18	.16	-.10	.19
PLANTS	.20	.28	-.14	.27	-.24	.45+	-.00
PODS PER	.52++	-.61++	.51++	.07	.65++	-.54++	-.82++
HEIGHT	.60	80	80	.40	.60	.60	.60
QUALITY	.62++	-.20	.11	.11	.29+	-.30+	-.66++
OF SEED	.60	.60	.60	.40	.60	.60	.60
PERCENT	1.00	-.27+	.14	.22	.19	-.21	-.54++
GERM.	.60	1.00	.60	.40	.60	.60	.60
SHATTER	-.27+	1.00	-.37++	.21	-.38++	-.07	.61++
HARVEST	.14	100	1.00	.40	.60	.80	.60
PLANTS	.60	100	1.00	.17	.29+	-.50++	-.36++
PODS PER	.22	.21	.17	1.00	-.02	.18	.02
HEIGHT	.40	.40	.40	.40	.40	.40	.40
QUALITY	.19	-.38++	.29+	-.02	1.00	-.59++	-.59++
OF SEED	.60	.60	.60	.18	.60	1.00	.60
PERCENT	-.21	-.07	-.50++	.18	-.59++	.71++	.71++
GERM.	-.54++	.61++	-.36++	.02	-.59++	.71++	1.00
SHATTER	.60	.60	.60	.40	.60	.60	.60

TABLE 47 COMBINED ANALYSIS FOR MIDDLE EASTERN SITES IN ZONE X, ISVEX 1978

VARIETY	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LONGING
CALLAND	2835.65	40.81	127.33	.00	.00	.00	.00	80.09	1.08
FORREST	2741.33	65.56	143.75	.00	.00	.00	.00	77.15	2.00
MITCHELL	2544.95	44.56	130.42	.00	.00	.00	.00	75.75	1.08
RILLITO	2378.82	81.44	172.67	.00	.00	.00	.00	95.36	2.42
FRANKLIN	2253.24	40.69	123.42	.00	.00	.00	.00	76.80	1.17
CUTLER 71	2217.53	41.50	127.67	.00	.00	.00	.00	75.42	1.17
GRAND MEAN	2495.25	52.43	137.54	.00	.00	.00	.00	80.10	1.49
NUMBER EXPERIMENTS CONTRIBUTING	4	4	3	0	0	0	0	4	3
STANDARD ERROR OF VARIETY MEAN	294.96	2.17	4.36	.00	.00	.00	.00	5.43	.49
COEFFICIENT OF VARIATION	47.28%	16.55%	10.98%	.00%	.00%	.00%	.00%	27.11%	114.21%
5% LSD VARIETY MEANS (*****NS)	*****	6.54	13.73	.00	.00	.00	.00	*****	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS									
(+ - PROB=.05, ++ - PROB=.01)									
YIELD	1.00	-.18	.03	.00	.00	.00	.00	.77++	.31++
DAYS TO FLOWER	96	96	72	0	0	0	0	96	72
DAYS TO MATURITY	96	96	.64++	.00	.00	.00	.00	.01	.44++
NODULE ABUND 1	72	72	1.00	.00	.00	.00	.00	.38++	.54++
NODULE ABUND 2	0	0	.00	1.00	.00	.00	.00	.72	.48
NODULE ACT. 1	0	0	.00	.00	1.00	.00	.00	.00	.00
NODULE ACT. 2	0	0	.00	.00	.00	1.00	.00	.00	.00
PLANT HEIGHT	.77++	.01	.38++	.00	.00	.00	.00	1.00	.48++
LONGING	96	96	.72	0	0	0	0	96	72
SHATTER	72	72	.44++	.00	.00	.00	.00	.48++	1.00
PLANTS HARVEST	-.45++	.06	.48	.00	.00	.00	.00	.72	.72
PODS PER PLANT	.34+	-.61++	.48	.00	.00	.00	.00	-.57++	-.26+
POD HEIGHT	.42++	.26+	-.20	.00	.00	.00	.00	.72	.72
100 SEED WEIGHT	.08	-.43+	.48	.00	.00	.00	.00	.26	-.01
QUALITY OF SEED	72	72	.24	.00	.00	.00	.00	.48	.48
PERCENT GERM.	-.17	-.80++	.48	.00	.00	.00	.00	.15	-.06
	.09	.68++	.57++	.00	.00	.00	.00	.72	.72
	48	48	.48	.00	.00	.00	.00	.24	.24
								.49++	-.11
								.07	.01
								.15	.48
								.48	.16
								.48	.48

TABLE 47 COMBINED ANALYSIS FOR MIDDLE EASTERN SITES IN ZONE X, ISVEX 1978

VARIETY	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
CALLAND	1.50	157.13	39.70	12.75	15.62	3.88	45.88
FORREST	1.42	87.63	55.69	14.75	13.36	2.25	78.75
MITCHELL	1.42	62.25	46.22	11.00	14.83	3.25	76.00
RILLITO	1.08	47.38	43.65	6.50	12.25	1.50	92.13
FRANKLIN	1.58	102.00	39.40	8.25	13.88	3.63	33.00
CUTLER 71	1.92	72.75	37.80	14.75	15.63	3.63	47.25
GRAND MEAN	1.49	88.19	43.74	11.33	14.26	3.02	62.17
NUMBER EXPERIMENTS CONTRIBUTING	3	2	3	1	3	2	2
STANDARD ERROR OF VARIETY MEAN	.29	19.79	6.72	1.37	.60	.45	15.88
COEFFICIENT OF VARIATION	66.63%	63.46%	53.21%	24.11%	14.48%	42.36%	72.26%
5% LSD VARIETY MEANS (****=NS)	*****	*****	*****	4.12	1.88	*****	*****
CORRELATIONS AND NUMBER OF OBSERVATIONS (+ - PROB=.05; ++ - PROB=.01)							
YIELD	KG/HA						
DAYS TO FLOWER		.34+	.42++	.08	.62++	-.17	.09
DAYS TO MATURITY		-.45++	.72	.24	.72	.48	.48
NODULE AROUND 1		.06	.26+	-.43+	-.42++	-.80++	.68++
NODULE AROUND 2		.72	.72	.72	.72	.48	.48
NODULE ACT. 1		-.49++	-.20	-.46+	-.53++	-.33+	.57++
NODULE ACT. 2		.48	.48	.24	.48	.48	.48
PLANT		.00	.00	.00	.00	.00	.00
LOGGING		.00	.00	.00	.00	.00	.00
SHATTER		.00	.00	.00	.00	.00	.00
HARVEST		.00	.00	.00	.00	.00	.00
PLANT		.00	.00	.00	.00	.00	.00
PODS PER		.00	.00	.00	.00	.00	.00
POD		.00	.00	.00	.00	.00	.00
100 SEED		.00	.00	.00	.00	.00	.00
QUALITY OF SEED		.00	.00	.00	.00	.00	.00
PERCENT		.00	.00	.00	.00	.00	.00
GERM.		.00	.00	.00	.00	.00	.00

TABLE 48 EXPERIMENT 113 YEAR 1978

REGION - AFRICA COUNTRY - ALGERIA
 SITE - AHMAR - EL - AIN ELEVATION - 56 M
 LATITUDE - 36 DEG. 38 MIN. N LONGITUDE - 40 MIN. E
 FERTILIZER USED (KG/HA) - N 150.0, P 90.0, K 60.0
 SOIL TYPE - SAND 20%, PH 7.5
 DATE PLANTED - APRIL 25, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LONGING
3	BOSSIER	1439.29	122.00	221.00	.00	.00	.00	.00	90.90	1.00
8	FORREST	1366.44	122.00	226.00	.00	.00	.00	.00	92.28	1.25
14	MITCHELL	1291.39	122.00	226.00	.00	.00	.00	.00	92.25	1.25
9	DAVIS	1194.26	122.00	221.00	.00	.00	.00	.00	94.85	1.50
1	IMPROVED PELICAN	1189.84	135.00	234.00	.00	.00	.00	.00	105.65	1.75
4	WILLIAMS	1034.21	78.00	148.00	.00	.00	.00	.00	53.33	1.00
6	COBB	988.96	122.00	226.00	.00	.00	.00	.00	87.05	1.25
16	CRAWFORD	954.74	83.00	150.00	.00	.00	.00	.00	73.98	1.00
7	JAMES	907.28	83.00	172.00	.00	.00	.00	.00	98.35	1.50
12	FRANKLIN	873.07	83.00	145.00	.00	.00	.00	.00	67.50	1.00
10	GASOY 17	865.34	40.00	148.50	.00	.00	.00	.00	61.32	1.00
5	RANSOM	847.68	122.00	242.00	.00	.00	.00	.00	80.35	1.00
2	RILLITO	710.81	122.00	212.00	.00	.00	.00	.00	74.08	1.00
15	BRAGG	487.86	76.00	160.00	.00	.00	.00	.00	69.78	1.00
11	CALLAND	463.57	39.00	150.00	.00	.00	.00	.00	61.65	1.00
13	CUTLER 71	390.73	73.00	144.00	.00	.00	.00	.00	59.38	1.00
GRAND MEAN		937.84	96.50	189.09	.00	.00	.00	.00	78.92	1.16
STANDARD ERROR OF A VARIETY MEAN		160.38	.00	.38	.00	.00	.00	.00	5.79	.16
COEFFICIENT OF VARIATION		34.20%	.00%	.40%	.00%	.00%	.00%	.00%	14.68%	27.91%
5% LSD VARIETY MEANS (*****=NS)		456.83	.00	1.07	.00	.00	.00	.00	16.50	.46
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.46++	.44++	.00	.00	.00	.00	.59++	.23
DAYS TO FLOWER		.46++	1.00	.90++	.00	.00	.00	.00	.60++	.31+
DAYS TO MATURITY		.44++	.90++	1.00	.00	.00	.00	.00	.62++	.31+
NODULE ABUND 1		.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	1.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANT HEIGHT		.59++	.60++	.62++	.00	.00	.00	.00	1.00	.56++
LOGGING		.23	.31+	.31+	.00	.00	.00	.00	.56++	1.00
SHATTER		.01	-.32+	-.36++	.00	.00	.00	.00	-.39++	-.14
HARVEST		.16	-.09	-.06	.00	.00	.00	.00	-.09	-.08
PLANTS PER		.43++	.19	.14	.00	.00	.00	.00	.53++	.43++
PODS PER		.07	.29+	.28+	.00	.00	.00	.00	.52++	.34++
100 SEED		.64++	.63++	.61++	.00	.00	.00	.00	.63++	.19
WEIGHT		-.57++	-.91++	-.81++	.00	.00	.00	.00	-.61++	-.31+
QUALITY OF SEED		.00	.00	.00	.00	.00	.00	.00	.00	.00
PERCENT										

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
3	ROSSIER	1.00	352.25	18.58	21.58	12.05	1.75	.00	43.7	17.9
8	FORREST	1.00	375.50	23.45	13.00	11.78	1.00	.00	42.4	18.7
14	MITCHELL	1.00	349.00	13.23	25.58	13.43	2.00	.00	45.9	14.9
9	DAVIS	1.00	336.25	18.85	19.70	13.75	1.00	.00	43.1	17.3
1	IMPROVED PELICAN	1.00	370.25	32.50	31.95	11.23	1.75	.00	44.7	16.0
4	WILLIAMS	1.50	400.00	19.15	13.05	9.30	3.00	.00	44.0	18.5
6	COBB	1.00	366.75	27.03	15.25	10.85	1.00	.00	40.6	16.2
16	CRAWFORD	1.00	312.00	25.05	12.43	10.15	3.00	.00	39.9	21.2
7	JAMES	1.00	319.25	23.45	42.80	9.10	3.00	.00	39.8	17.0
12	FRANKLIN	1.50	449.00	18.38	18.55	11.20	3.00	.00	40.9	18.6
10	GASOY 17	1.50	380.00	16.88	13.15	9.53	5.00	.00	41.1	22.3
5	RANSOM	1.00	444.00	15.95	23.95	12.28	2.00	.00	41.8	21.1
2	RILLITO	1.00	246.25	15.68	20.58	11.45	2.00	.00	42.9	17.9
15	BAGG	1.00	377.00	12.38	22.70	9.48	4.00	.00	42.5	18.3
11	CALLAND	1.00	358.00	18.53	12.25	7.83	5.00	.00	44.3	17.7
13	CUTLER 71	1.00	362.50	17.45	16.43	8.40	3.75	.00		
	GRAND MEAN	1.09	362.38	19.78	20.18	10.74	2.64	.00		
	STANDARD ERROR OF A VARIETY MEAN	.13	29.52	3.14	2.28	.74	.21	.00		
	COEFFICIENT OF VARIATION	23.36%	16.29%	31.73%	22.64%	13.80%	15.54%	.00%		
	5% LSD VARIETY MEANS (*****=NS)	.36	84.08	8.94	6.51	2.11	.58	.00		

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C O R R E L A T I O N S

++ - PROB=.01)

(+ - PROB=.05

YIELD	KG/HA	YIELD	KG/HA
DAYS TO	FLOWER	-.16	.01
DAYS TO	MATURITY	-.32+	-.09
NODULE	ABUND 1	-.36++	-.06
NODULE	ABUND 2	.00	.00
NODULE	ACT. 1	.00	.00
NODULE	ACT. 2	.00	.00
PLANT	HEIGHT	-.39++	.00
LOGGING	SHATTER	-.14	-.08
PLANTS	HARVEST	1.00	.21
PODS PER	PLANT	-.10	1.00
100 SEED	WEIGHT	-.17	-.04
QUALITY	OF SEED	-.26+	.06
PERCENT	GERM.	.29+	.06

TABLE 49 EXPERIMENT 115 YEAR 1978

REGION - AFRICA COUNTRY - ALGERIA
 SITE - KHEMIS - MILIANA ELEVATION - 296 M
 LATITUDE - 36 DEG. 15 MIN. N LONGITUDE - 2 DEG. 14 MIN. E
 COOPERATOR - I.D.C.I. DATE HARVESTED - AUGUST, 1978
 DATE PLANTED - APRIL 11, 1978
 SOIL PH - 8.2
 FERTILIZER USED (KG/HA) - N 30.0, P 90.0, K 60.0
 AMOUNT OF MOISTURE - 938 MM
 NUMBER OF IRRIGATIONS - 24 (510 MM)
 LOCAL VARIETIES - KAI YU 3, TIE - FENG 19

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
6	TIE - FENG 19	705.97	82.00	150.00	3.00	1.75	.00	.00	42.23	1.75
2	KAI YU 3	419.62	82.00	150.00	2.00	2.25	.00	.00	46.83	1.00
4	CUTLER 71	297.17	82.00	150.00	1.00	1.00	.00	.00	56.98	1.00
5	MITCHELL	290.09	82.00	150.00	1.75	2.00	.00	.00	47.90	1.00
1	WILLIAMS	280.10	82.00	150.00	1.50	1.75	.00	.00	49.58	1.00
3	CALLAND	216.58	82.00	150.00	2.00	1.75	.00	.00	55.08	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		368.26	82.00	150.00	1.88	1.75	.00	.00	49.76	1.13
COEFFICIENT OF VARIATION		59.36	.00	.00	.57	.46	.00	.00	3.41	.10
5% LSD VARIETY MEANS (*****=NS)		32.24%	.00%	.00%	60.48%	52.16%	.00%	.00%	13.69%	18.14%
		178.95	.00	.00	*****	*****	.00	.00	*****	.31
C O R R E L A T I O N S										
		(+ - PROB=.05 ++ - PRDE=.01)								
YIELD	KG/HA	1.00	.00	.00	.18	.08	.00	.00	-.12	.50+
DAYS TO	FLOWER	.00	.00	.00	.00	.00	.00	.00	.00	.00
DAYS TO	MATURITY	.00	1.00	.00	.00	.00	.00	.00	.00	.00
NODULE	ABUND 1	.18	.00	.00	1.00	.41+	.00	.00	-.56++	.49+
NODULE	ABUND 2	.08	.00	.00	.41+	1.00	.00	.00	-.30	.11
NODULE	ACT. 1	.00	.00	.00	.00	.00	1.00	.00	.00	.00
NODULE	ACT. 2	.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANT	HEIGHT	-.12	.00	.00	-.56++	-.30	.00	.00	1.00	-.23
LODGING		.50+	.00	.00	.49+	.11	.00	.00	-.23	1.00
SHATTER		.64++	.00	.00	.39	.21	.00	.00	-.46+	.53++
HARVEST		.22	.00	.00	-.32	.00	.00	.00	.05	-.38
PODS PER	PLANT	.67++	.00	.00	.29	.03	.00	.00	-.18	.57++
POD	HEIGHT	-.35	.00	.00	-.33	-.07	.00	.00	.30	-.29
100 SEED	WEIGHT	.31	.00	.00	.25	.06	.00	.00	-.42+	.24
QUALITY	OF SEED	.06	.00	.00	.14	.06	.00	.00	.11	0.00
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	.00	.00	.00

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
6	TIE - FENG 19	4.00	439.25	16.48	11.15	10.13	4.00	.00	43.1	16.2
2	KAI YU 3	4.00	480.50	13.50	12.58	9.80	5.00	.00	43.8	15.6
4	CUTLER 71	1.00	476.75	11.58	14.70	8.75	4.00	.00	42.6	15.3
5	MITCHELL	1.00	427.75	11.28	15.68	9.13	3.00	.00		
1	WILLIAMS	1.00	464.00	13.15	11.75	9.63	3.00	.00		
3	GALLAND	1.00	419.25	7.90	13.98	8.33	5.00	.00	46.2	13.3

GRAND MEAN
STANDARD ERROR OF A VARIETY MEAN
COEFFICIENT OF VARIATION
5% LSD VARIETY MEANS (*****=NS)

C O R R E L A T I O N S

(+ - PROB=.05 ++ - PROB=.01)

YIELD	KG/HA	.22	.67++	-.35	.31	.06	.00
DAYS TO FLOWER		.00	.00	.00	.00	.00	.00
DAYS TO MATURITY		.00	.00	.00	.00	.00	.00
NODULE AROUND 1		-.32	.29	-.33	.25	.14	.00
NODULE AROUND 2		.21	.03	-.07	.26	.06	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00
PLANT		-.46+	.05	-.18	.30	.42+	.00
LODGING		.53++	-.38	.57++	-.29	.24	.00
SHATTER		1.00	.10	.54++	-.36	.36	.43+
HARVEST		.10	1.00	.23	.17	.11	.03
PLANTS		.54++	-.23	1.00	-.64++	.49+	.00
PODS PER PLANT		.36	.17	-.64++	1.00	-.53++	.00
POD HEIGHT		.36	-.11	.49+	-.53++	1.00	.00
100 SEED WEIGHT		.43+	.03	-.18	-.06	.10	.00
QUALITY OF SEED		.00	.00	.00	.00	1.00	.00
PERCENT GERM.						.00	1.00

TABLE 50 EXPERIMENT 174 YEAR 1978

REGION - AFRICA
SITE - MAHALAPYE
LATITUDE - 23 DEG, 7 MIN, S
COOPERATOR - G. MAPHANYANE
COUNTRY - BOTSWANA
ELEVATION - 1000 M
LONGITUDE - 26 DEG, 50 MIN, E

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEULE ABUND 1	NODEULE ABUND 2	NODEULE ACT. 1	NODEULE ACT. 2	PLANT HEIGHT	LOGGING
2	RILLITO	1582.94	.00	.00	4.00	4.00	85.75	5.50	59.75	1.00
6	COBB	1333.00	.00	.00	4.00	4.00	82.75	4.75	37.00	1.00
1	IMPROVED PELICAN	1191.37	.00	.00	4.25	4.00	64.50	7.50	86.25	1.00
3	BOSSIER	1183.04	.00	.00	4.00	3.75	76.00	5.50	33.00	1.00
8	FORREST	966.42	.00	.00	4.25	4.25	61.00	3.75	34.25	1.00
11	CALLAND	808.13	.00	.00	4.00	4.00	74.00	11.00	39.00	1.00
16	CRAWFORD	783.14	.00	.00	4.00	4.00	67.25	8.00	31.50	1.00
5	RANSOM	766.47	.00	.00	4.00	3.75	73.00	11.25	39.25	1.00
9	DAVIS	766.47	.00	.00	4.00	4.00	78.50	9.25	35.50	1.00
15	BRAGG	741.48	.00	.00	4.00	3.75	89.00	8.75	39.25	1.00
14	MITCHELL	716.49	.00	.00	4.00	4.00	69.75	11.00	37.00	1.00
10	GASDY 17	691.49	.00	.00	4.00	3.75	83.25	11.00	35.25	1.00
7	JAMES	658.17	.00	.00	4.00	3.75	82.75	4.00	32.25	1.00
4	WILLIAMS	624.84	.00	.00	4.25	4.00	53.75	7.25	35.00	1.00
13	CUTLER 71	599.85	.00	.00	4.00	4.00	70.75	4.00	34.25	1.00
12	FRANKLIN	408.23	.00	.00	4.00	3.75	80.50	7.50	32.50	1.00
GRAND MEAN		863.85	.00	.00	4.05	3.92	74.66	7.50	40.06	1.00
STANDARD ERROR OF A VARIETY MEAN		145.15	.00	.11	5.31%	9.56%	31.23%	2.56	4.32	.00
COEFFICIENT OF VARIATION		33.61%	.00%	.00	*****	*****	*****	*****	21.57%	.00%
5% LSD VARIETY MEANS (*****=NS)		413.46	.00	.00	*****	*****	*****	*****	12.31	.00

[illegible]

(CONTINUED)

YEAR: 1978

EXPERIMENT 174

TABLE 50

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
2	RILLITO	1.00	22.75	94.25	6.25	16.25	1.75	.00	42.6	21.2
6	COBB	1.25	39.00	60.00	6.75	14.25	2.50	.00	39.9	22.4
1	IMPROVED PELICAN	1.00	39.25	69.75	14.75	9.75	1.50	.00	41.9	20.1
3	BOSSIER	1.25	38.25	61.75	7.25	14.00	2.00	.00	43.8	19.4
8	FORREST	1.00	32.75	42.00	5.25	11.50	3.25	.00	40.4	19.0
11	CALLAND	1.75	38.75	25.25	6.00	17.50	3.00	.00	40.3	19.4
16	CRAMFORD	1.25	36.00	33.50	5.00	15.75	2.75	.00		
5	RANSOM	1.25	36.75	47.50	5.75	16.75	4.00	.00		
9	DAVIS	2.00	34.00	44.00	4.75	17.50	2.00	.00	41.9	20.6
15	BAGG	1.25	39.00	51.25	6.00	18.00	3.25	.00	43.5	19.9
14	MITCHELL	2.00	33.25	34.75	5.75	15.50	2.00	.00	40.7	18.3
10	GASOY 17	1.75	34.25	46.75	5.50	17.00	2.75	.00	42.9	19.4
7	JAMES	1.25	36.00	32.00	5.00	15.75	3.25	.00	40.0	22.3
4	WILLIAMS	1.25	32.25	25.75	5.25	14.75	2.25	.00	41.1	20.6
13	CUTLER 71	2.25	45.00	26.50	6.50	13.75	2.75	.00	40.7	20.4
12	FRANKLIN	2.25	40.00	20.25	4.50	14.00	2.75	.00	36.9	22.9
GRAND MEAN										
		1.48	36.08	44.70	6.27	15.13	2.61	.00		
STANDARD ERROR OF A VARIETY MEAN										
		.29	4.53	7.64	.67	.86	.35	.00		
COEFFICIENT OF VARIATION										
		39.32%	25.13%	34.16%	21.41%	11.32%	26.84%	.00%		
5% LSD VARIETY MEANS (*****=NS)										
		.83	*****	21.75	1.91	2.44	1.00	.00		
C O R R E L A T I O N S										
			(+ - PROB=.05	++ - PROB=.01)						
YIELD										
KG/HA										
DAYS TO										
FLOWER										
DAYS TO										
MATURITY										
NODULE										
ABUND 1										
NODULE										
ABUND 2										
NODULE										
ACT. 1										
NODULE										
ACT. 2										
NODULE										
PLANT										
HEIGHT										
LODGING										
SHATTER										
HARVEST										
PLANT										
PODS PER										
PLANT										
POD										
HEIGHT										
100 SEED										
WEIGHT										
QUALITY										
OF SEED										
PERCENT										
GERM.										

TABLE 51 EXPERIMENT 175 YEAR 1978

REGION - AFRICA COUNTRY - BOTSWANA
 SITE - SEBELE ELEVATION - 994 M
 LATITUDE - 24 DEG. 34 MIN. S LONGITUDE - 25 DEG. 57 MIN. E
 COOPERATORS - G. MAPHANYANE, D.E. GOLLIFER
 DATE PLANTED - OCTOBER 27, 1978 DATE HARVESTED - FEBRUARY, 1979
 SOIL PH 5.5
 FERTILIZER USED (KG/HA) - P 20.0
 AMOUNT OF MOISTURE - 313.2 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
6	COBB	268.60	52.50	125.50	.00	3.25	.00	56.25	35.00	.00
9	DAVIS	245.61	61.00	123.00	.00	1.75	.00	90.00	24.75	.00
2	RILLITO	221.28	57.50	135.75	.00	4.25	.00	35.00	48.50	.00
12	FRANKLIN	203.95	35.50	123.00	.00	5.00	.00	.00	18.75	.00
7	JAMES	188.29	33.25	132.25	.00	5.00	.00	.00	24.25	.00
15	CRAWFORD	184.29	40.50	123.00	.00	4.75	.00	1.25	25.00	.00
8	FORREST	181.62	42.50	123.00	.00	3.75	.00	35.00	26.00	.00
5	RANSOM	158.29	51.00	123.00	.00	3.00	.00	43.75	20.50	.00
10	GASOY 17	155.63	51.00	125.50	.00	2.00	.00	86.25	23.75	.00
11	CALLAND	155.63	32.00	132.50	.00	5.00	.00	.00	23.25	.00
14	BROGG	153.63	52.50	123.00	.00	2.50	.00	80.00	28.25	.00
13	MITCHELL	133.97	39.00	123.00	.00	5.00	.00	.00	33.75	.00
3	BOSSIER	114.97	66.00	151.00	.00	4.00	.00	32.50	35.75	.00
4	WILLIAMS	106.64	43.25	101.00	.00	4.50	.00	12.50	28.00	.00
1	IMPROVED PELICAN	46.32	57.50	146.50	.00	4.00	.00	43.75	68.00	.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
(+ - PROB=.05 ++ - PROB=.01) C O R R E L A T I O N S										
YIELD	KG/HA	1.00								
DAYS TO FLOWER		-.08								
DAYS TO MATURITY		1.00								
NODULE ABUND 1		-.24								
NODULE ABUND 2		.00								
NODULE ACT. 1		-.22								
NODULE ACT. 2		.00								
PLANT HEIGHT		.13								
LODGING		-.25								
SHATTER		.00								
HARVEST		-.54++								
PLANT		-.15								
PODS PER PLANT		.00								
POD HEIGHT		.00								
100 SEED WEIGHT		-.06								
QUALITY OF SEED		-.06								
PERCENT GERM.		.00								

TABLE 51

EXPERIMENT 175

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
6	COBB	1.75	17.50	.00	.00	14.00	2.00	.00	39.9	22.4
9	DAVIS	3.00	27.25	.00	.00	11.50	2.00	.00	41.9	20.6
2	RILLITO	1.75	7.75	.00	.00	12.25	2.00	.00	42.6	21.2
12	FRANKLIN	3.50	13.00	.00	.00	14.50	2.00	.00	36.9	22.9
7	JAMES	3.00	29.75	.00	.00	17.50	2.25	.00	40.0	22.3
15	CRAWFORD	2.50	18.50	.00	.00	20.50	2.00	.00		
8	FORREST	1.75	14.00	.00	.00	14.75	2.00	.00	40.4	19.0
5	RANSOM	4.00	24.00	.00	.00	12.25	2.00	.00	42.6	21.6
10	GASOY 17	3.25	24.75	.00	.00	11.25	2.00	.00	42.2	19.4
11	CALLAND	2.50	19.50	.00	.00	21.00	2.00	.00	40.3	19.4
14	BRAGG	4.25	35.50	.00	.00	11.25	2.00	.00	43.5	19.9
13	MITCHELL	3.00	20.00	.00	.00	23.00	2.00	.00	40.7	18.3
3	BOSSIER	3.25	13.25	.00	.00	13.25	2.25	.00	43.8	19.4
4	WILLIAMS	3.00	16.50	.00	.00	10.75	2.00	.00	41.1	20.6
1	IMPROVED PELICAN	4.25	26.75	.00	.00	13.50	2.00	.00	41.9	20.1
GRAND MEAN										
		2.98	20.53	.00	.00	14.75	2.03	.00		
STANDARD ERROR OF A VARIETY MEAN		.62	5.66	.00	.00	.63	.09	.00		
COEFFICIENT OF VARIATION		41.27%	55.18%	.00%	.00%	8.52%	9.09%	.00%		
5% LSD VARIETY MEANS (*****=NS) *****										
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	-.54++	-.15	.00	.00	-.06	-.06	.00		
DAYS TO FLOWER		.06	.17	.00	.00	-.45++	.05	.00		
DAYS TO MATURITY		.04	-.10	.00	.00	.09	.13	.00		
NODULE AROUND 1		.00	.00	.00	.00	.00	.00	.00		
NODULE AROUND 2		-.09	-.18	.00	.00	.55++	.16	.00		
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00		
NODULE ACT. 2		.11	.21	.00	.00	-.57++	-.17	.00		
NODULE HEIGHT		.02	-.07	.00	.00	-.13	-.06	.00		
PLANT LODGING		.00	.00	.00	.00	.00	.00	.00		
SHATTER		1.00	.37++	.00	.00	-.15	.07	.00		
HARVEST		.37++	1.00	.00	.00	-.01	.18	.00		
PLANTS		.00	.00	.00	.00	.00	.00	.00		
PODS PER PLANT		.00	.00	1.00	.00	.00	.00	.00		
POD HEIGHT		.00	.00	.00	1.00	.00	.00	.00		
POD WEIGHT		-.15	-.01	.00	.00	1.00	.00	.00		
100 SEED		.07	.18	.00	.00	.08	1.00	.00		
QUALITY OF SEED		.00	.00	.00	.00	.00	.00	.00		
PERCENT GERM.		.00	.00	.00	.00	.00	.00	1.00		

TABLE 52

EXPERIMENT 34

YEAR 1978

REGION - AFRICA
 SITE - ISCHANG
 LATITUDE - 5 DEG, 27 MIN. N
 COOPERATOR - IRAF
 DATE PLANTED - MARCH 22, 1979
 SOIL TYPE - SAND 43.4%, SILT 32.4%, CLAY 24.2%, PH 5.8

COUNTRY - CAMEROON
 ELEVATION - 1450 M
 LONGITUDE - 10 DEG, 5 MIN. E

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
4	HARDEE LS	3061.03	42.00	124.00	3.00	.00	.00	.00	57.25	.00
1	CH-3	2690.12	34.00	116.00	4.00	.00	.00	.00	74.50	.00
6	IAC-2	2544.26	35.00	110.00	4.00	.00	.00	.00	70.75	.00
7	TUNIA	2492.16	30.00	108.00	4.00	.00	.00	.00	55.00	.00
10	IMPROVED PELICAN	2350.47	35.00	99.00	4.00	.00	.00	.00	50.75	.00
9	JUPITER	2321.30	39.00	127.00	4.00	.00	.00	.00	64.00	.00
5	ORBA	2308.79	35.00	99.00	2.50	.00	.00	.00	64.25	.00
3	SJ-2	2281.71	34.00	109.00	4.00	.00	.00	.00	55.00	.00
2	UFV-1	2171.27	34.00	102.00	3.00	.00	.00	.00	42.25	.00
11	KAHALA	1829.53	31.00	90.25	3.50	.00	.00	.00	49.00	.00
16	COBB	1779.52	27.00	88.00	2.50	.00	.00	.00	41.50	.00
8	CARIBE	1683.67	31.00	112.00	4.00	.00	.00	.00	50.75	.00
12	RILLITO	1652.41	27.00	89.00	3.50	.00	.00	.00	38.75	.00
14	WILLIAMS	1429.45	25.00	87.50	2.50	.00	.00	.00	35.25	.00
13	BOSSIER	1354.44	29.00	96.75	3.00	.00	.00	.00	30.75	.00
15	RANSOM	1148.15	25.00	88.00	2.50	.00	.00	.00	25.25	.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.68++	.60++	.24	.00	.00	.00	.71++	.00
DAYS TO FLOWER		.68++	1.00	.83++	.27+	.00	.00	.00	.66++	.00
DAYS TO MATURITY		.60++	.83++	1.00	.37++	.00	.00	.00	.66++	.00
NODULE ABUND 1		.24	.27+	.37++	1.00	.00	.00	.00	.36++	.00
NODULE ABUND 2		.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	1.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANT	HEIGHT	.71++	.66++	.66++	.36++	.00	.00	.00	1.00	.00
LOGGING		.00	.00	.00	.00	.00	.00	.00	.00	1.00
SHATTER		.00	.00	.00	.00	.00	.00	.00	.00	.00
HARVEST		.33++	.06	.67++	.24	.00	.00	.00	.33++	.00
PODS PER PLANT		.62++	.06	.64++	.00	.00	.00	.00	.56++	.00
POD	HEIGHT	.00	.00	.00	.00	.00	.00	.00	.00	.00
100 SEED	WEIGHT	-.11	.00	.00	.00	.00	.00	.00	.00	.00
QUALITY	OF SEED	-.30+	-.17	-.39++	-.11	.00	.00	.00	-.23	.00
PERCENT	GERM.	.18	.27+	.13	.00	.00	.00	.00	.18	.00

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
4	HARDEE LS	.00	174.25	36.05	.00	19.10	1.75	100.00	40.5	20.9
1	CH-3	.00	209.50	30.95	.00	16.13	2.50	98.50	40.2	20.5
6	IAC-2	.00	254.50	28.00	.00	18.03	3.00	99.75	40.6	21.3
7	TUNIA	.00	228.75	21.18	.00	17.83	2.75	100.00	36.2	24.0
10	IMPROVED PELICAN	.00	198.75	22.80	.00	14.73	2.00	99.75	38.9	21.0
9	JUPITER	.00	159.00	22.05	.00	20.38	1.75	98.25	37.9	21.2
5	ORBA	.00	276.50	24.35	.00	13.40	2.00	100.00	36.0	19.0
3	SJ-2	.00	169.25	30.18	.00	14.68	2.00	100.00	40.9	19.5
2	UFV-1	.00	232.75	20.65	.00	16.48	2.25	100.00	38.7	22.2
11	KAHALA	.00	176.00	21.93	.00	19.60	2.00	98.75	38.7	18.8
16	COBB	.00	211.25	17.33	.00	18.15	2.50	97.75	38.5	20.5
8	CARIBE	.00	190.75	26.70	.00	13.78	2.50	96.00	41.7	18.4
12	RILLITO	.00	195.25	18.35	.00	17.03	3.00	97.00	38.9	22.3
14	WILLIAMS	.00	198.25	12.48	.00	19.40	3.25	96.75	38.6	22.1
13	BOSSIER	.00	103.00	22.45	.00	18.85	3.50	98.00	40.3	21.6
15	RANSOM	.00	177.75	12.93	.00	20.43	3.00	99.75	41.6	23.6
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										

GRAND MEAN
STANDARD ERROR OF A VARIETY MEAN
COEFFICIENT OF VARIATION
5% LSD VARIETY MEANS (*****=NS)

C O R R E L A T I O N S

(+ - PROB=.05

++ - PROB=.01)

YIELD	KG/HA	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
DAYS TO FLOWER	.00	.00	.33++	.62++	.00	-.11	-.30+	.18	40.5	20.9
DAYS TO MATURITY	.00	.00	.06	.67++	.00	-.17	-.58++	.27+	40.2	20.5
NODULE ABUND 1	.00	.00	-.02	.64++	.00	-.09	-.38++	.13	40.6	21.3
NODULE ABUND 2	.00	.00	-.10	.24	.00	-.14	-.11	.00	36.2	24.0
NODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00	.00	38.9	21.0
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00	.00	37.9	21.2
NODULE PLANT	.00	.00	.33++	.56++	.00	-.23	-.39++	.18	36.0	19.0
LODGING	.00	.00	.00	.00	.00	.00	.00	.00	40.9	19.5
SHATTER	1.00	.00	.00	.00	.00	.00	.00	.00	38.7	22.2
PLANTS HARVEST	.00	.00	1.00	-.10	.00	-.28+	-.08	.04	38.7	18.8
PODS PER PLANT	.00	.00	-.10	1.00	.00	-.26+	-.28+	.13	38.5	20.5
POD HEIGHT	.00	.00	.00	.00	1.00	.00	.00	.00	41.7	18.4
100 SEED WEIGHT	.00	.00	-.28+	-.26+	.00	1.00	.22	-.03	38.9	22.3
QUALITY OF SEED	.00	.00	-.08	-.28+	.00	.22	1.00	-.22	38.6	22.1
PERCENT GERM.	.00	.00	.04	.13	.00	-.03	-.22	1.00	40.3	21.6

TABLE 53 EXPERIMENT 32 YEAR 1978

REGION - AFRICA
 SITE - FOUMBOT
 LATITUDE - 5 DEG. 31 MIN. N
 COOPERATOR - IRAF
 DATE PLANTED - JULY 21, 1978
 SOIL PH 6.5
 AMOUNT OF MOISTURE - 1010 MM

COUNTRY - CAMEROON
 ELEVATION - 1100 M
 LONGITUDE - 10 DEG. 38 MIN. E

DATE HARVESTED - NOVEMBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NUDULE ABUND 1	NUDULE ABUND 2	NUDULE ACT. 1	NUDULE ACT. 2	PLANT HEIGHT	LOADING
4	HARDEE LS	2965.18	47.00	114.00	.00	.00	.00	.00	46.00	.00
3	SJ-2	2815.15	48.25	103.00	.00	.00	.00	.00	51.25	.00
8	CARIRE	2667.20	48.00	97.00	.00	.00	.00	.00	51.25	.00
9	JUPITER	2558.84	57.75	111.00	.00	.00	.00	.00	64.25	.00
16	COBB	2223.36	38.75	93.00	.00	.00	.00	.00	35.75	.00
10	IMPROVED PELICAN	2219.19	48.75	97.00	.00	.00	.00	.00	53.00	.00
5	ORRA	2179.60	46.75	96.00	.00	.00	.00	.00	62.00	.00
2	UFV-1	1897.88	44.75	106.00	.00	.00	.00	.00	35.25	.00
1	CH-3	1785.77	44.25	112.00	.00	.00	.00	.00	53.75	.00
6	IAC-2	1596.15	47.75	98.00	.00	.00	.00	.00	54.00	.00
7	TUNIA	1277.34	48.00	106.00	.00	.00	.00	.00	41.75	.00
13	BOSSIER	1185.65	48.00	96.00	.00	.00	.00	.00	42.25	.00
15	RANSOM	950.19	36.75	83.00	.00	.00	.00	.00	27.50	.00
11	KAHALA	848.09	43.00	87.50	.00	.00	.00	.00	34.00	.00
12	RILLITO	720.98	36.50	87.50	.00	.00	.00	.00	29.50	.00
14	WILLIAMS	714.73	34.25	79.00	.00	.00	.00	.00	23.50	.00
GRAND MEAN		1787.21	44.91	97.88	.00	.00	.00	.00	44.06	.00
STANDARD ERROR OF A VARIETY MEAN		118.38	2.70	.32	.00	.00	.00	.00	3.73	.00
COEFFICIENT OF VARIATION		13.25%	12.04%	.65%	.00%	.00%	.00%	.00%	16.91%	.00%
5% LSD VARIETY MEANS (*****=NS)		337.18	7.70	.90	.00	.00	.00	.00	10.61	.00

CORRELATIONS									
					+ - PROB=.05		++ - PROB=.01		
YIELD	KG/HA	1.00							
DAYS TO FLOWER		.46++	1.00						
DAYS TO MATURITY		.66++	1.00						
NUDULE ABUND 1		.56++	1.00						
NUDULE ABUND 2		.00	.00	1.00					
NUDULE ACT. 1		.00	.00	.00	1.00				
NUDULE ACT. 2		.00	.00	.00	.00	1.00			
PLANT		.63++	.60++	.00	.00	.00	1.00		
LOADING		.00	.00	.59++	.00	.00	.00	1.00	
SHATTER		.00	.00	.00	.00	.00	.00	.00	1.00
PLANTS PER HARVEST		-.48++	-.32++	-.62++	.00	.00	.00	.00	.00
PODS PER PLANT		.81++	.43++	.49++	.00	.00	.00	.00	.00
100 SEED WEIGHT		.00	.00	.00	.00	.00	.00	.00	.00
QUALITY OF SEED		.00	.00	.00	.00	.00	.00	.00	.00
PERCENT GERM.		.00	.00	.00	.00	.00	.00	.00	.00

TABLE 53 EXPERIMENT 32 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
4	HARDEE LS	.00	228.00	32.35	.00	.00	.00	.00
3	SJ-2	.00	245.00	30.78	.00	.00	.00	.00
8	CARIBE	.00	249.25	36.08	.00	.00	.00	.00
9	JUPITER	.00	251.75	18.23	.00	.00	.00	.00
16	COBB	.00	301.00	16.55	.00	.00	.00	.00
10	IMPROVED PELICAN	.00	323.50	31.08	.00	.00	.00	.00
5	ORBA	.00	261.50	28.10	.00	.00	.00	.00
2	UFV-1	.00	266.00	13.75	.00	.00	.00	.00
1	CH-3	.00	244.50	22.88	.00	.00	.00	.00
6	IAC-2	.00	283.00	24.28	.00	.00	.00	.00
7	TUNIA	.00	281.75	10.48	.00	.00	.00	.00
13	BOSSIER	.00	298.25	12.20	.00	.00	.00	.00
15	RANSOM	.00	299.75	7.70	.00	.00	.00	.00
11	KAHALA	.00	302.50	7.48	.00	.00	.00	.00
12	RILLITO	.00	267.50	8.48	.00	.00	.00	.00
14	WILLIAMS	.00	319.00	6.50	.00	.00	.00	.00
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN								
COEFFICIENT OF VARIATION								
5% LSD VARIETY MEANS (*****NS)								
CORRELATIONS								
YIELD KG/HA								
DAYS TO FLOWER								
DAYS TO MATURITY								
NODULE ABUND 1								
NODULE ABUND 2								
NODULE ACT. 1								
NODULE ACT. 2								
PLANT HEIGHT								
LOGGING								
SHATTER								
PLANTS HARVEST								
PODS PER PLANT								
POD HEIGHT								
100 SEED WEIGHT								
QUALITY OF SEED								
PERCENT GERM.								

TABLE 54 EXPERIMENT 33 YEAR 1978

REGION - AFRICA
 SITE - SANTICHO
 LATITUDE - 5 DEG. N
 COOPERATOR - IRAF
 DATE PLANTED - MARCH 23, 1979
 SOIL TYPE - HYDROMORPHE SUR PSEUDOGLEY
 FERTILIZER USED (KG/HA) - N 20.0
 COUNTRY - CAMEROON
 ELEVATION - 700 M
 LONGITUDE - 10 DEG. E
 DATE HARVESTED - JULY, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
15	RANSOM	2481.75	26.25	84.00	.00	.00	.00	.00	40.75	.00
4	HARDEE LS	2287.96	41.00	103.25	.00	.00	.00	.00	76.25	.00
14	WILLIAMS	2235.86	27.50	79.25	.00	.00	.00	.00	57.25	.00
7	TUNIA	2140.01	29.50	97.00	.00	.00	.00	.00	65.25	.00
11	KAHALA	2017.07	27.75	78.75	.00	.00	.00	.00	55.00	.00
8	CARIBE	1983.73	33.25	105.50	.00	.00	.00	.00	70.25	.00
2	UFV-1	1960.81	32.25	85.00	.00	.00	.00	.00	50.25	.00
9	JUPITER	1960.81	39.50	100.00	.00	.00	.00	.00	76.50	.00
13	BOSSIER	1927.47	32.25	85.50	.00	.00	.00	.00	49.75	.00
5	ORBA	1900.38	32.50	81.75	.00	.00	.00	.00	71.50	.00
16	COBB	1883.71	26.50	85.25	.00	.00	.00	.00	35.25	.00
6	IAC-2	1873.29	32.75	88.00	.00	.00	.00	.00	81.00	.00
10	IMPROVED PELICAN	1858.70	33.25	82.25	.00	.00	.00	.00	71.75	.00
3	SJ-2	1721.18	33.50	85.00	.00	.00	.00	.00	74.25	.00
12	RILLITO	1717.01	28.25	79.25	.00	.00	.00	.00	57.25	.00
1	CH-3	1454.46	33.00	99.25	.00	.00	.00	.00	92.25	.00
GRAND MEAN		1962.76	31.81	88.69	.00	.00	.00	.00	64.03	.00
STANDARD ERROR OF A VARIETY MEAN		227.75	.34	1.13	.00	.00	.00	.00	3.79	.00
COEFFICIENT OF VARIATION		23.21%	2.13%	2.56%	.00%	.00%	.00%	.00%	11.83%	.00%
5% LSD VARIETY MEANS (*****=NS)		*****	.96	3.23	.00	.00	.00	.00	10.79	.00

CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
1.00	-.04	-.04	.00	.00	.00	.00	-.09	.00
-.04	1.00	.62++	.00	.00	.00	.00	.62++	.00
.03	.62++	1.00	.00	.00	.00	.00	.49++	.00
.00	.00	.00	1.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	1.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	1.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	1.00	.00	.00
-.09	.62++	.00	.00	.00	.00	.00	1.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00
.07	-.01	.45++	.00	.00	.00	.00	.13	.00
.07	.00	.00	.00	.00	.00	.00	.44++	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00
.30+	-.34++	-.24	.00	.00	.00	.00	-.26+	.00
-.08	-.24	.00	.00	.00	.00	.00	-.08	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 54 EXPERIMENT 33 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
15	RANSOM	.00	344.50	10.48	.00	19.70	3.00	.00	41.6	23.6
4	HARDEE LS	.00	338.50	14.05	.00	16.33	3.00	.00	40.5	20.9
14	WILLIAMS	.00	364.00	9.45	.00	19.35	4.00	.00	38.6	22.1
7	TUNIA	.00	334.75	9.98	.00	17.00	2.50	.00	36.2	24.0
11	KAHALA	.00	307.25	10.20	.00	20.48	3.50	.00	38.7	18.8
8	CARIBE	.00	281.75	15.60	.00	12.50	3.00	.00	41.7	18.4
2	UFV-1	.00	335.00	11.30	.00	13.93	2.00	.00	38.7	22.2
9	JUPITER	.00	349.50	17.88	.00	16.15	3.25	.00	37.9	21.2
13	BOSSIER	.00	260.25	12.23	.00	15.78	2.50	.00	40.3	21.6
5	ORRA	.00	329.50	16.85	.00	13.55	4.75	.00	36.0	19.0
16	COBB	.00	323.75	12.73	.00	15.83	3.50	.00	38.5	20.5
6	IAC-2	.00	334.25	14.03	.00	17.80	2.25	.00	40.6	21.3
10	IMPROVED PELICAN	.00	331.75	12.78	.00	13.65	3.75	.00	38.9	21.0
3	SJ-2	.00	355.25	18.25	.00	13.38	2.00	.00	40.9	19.5
12	RILLITO	.00	363.75	8.30	.00	14.25	5.00	.00	38.9	22.3
1	CH-3	.00	336.25	14.38	.00	14.95	3.00	.00	40.2	20.3
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		.00	330.63	13.03	.00	15.91	3.19	.00		
COEFFICIENT OF VARIATION		.00	11.75	1.89	.00	.56	.22	.00		
5% LSD VARIETY MEANS (*****NS)		.00	7.11%	29.02%	.00	7.06%	13.73%	.00		
		.00	33.46	5.38	.00	1.60	.62	.00		
C O R R E L A T I O N S										
			(+ - PROB=.05	++ - PROB=.01)						
YIELD	KG/HA	.00	.07	.07	.00	.30+	.08	.00		
DAYS TO	FLOWER	.00	-.01	.45+	.00	-.34++	-.24	.00		
DAYS TO	MATURITY	.00	-.15	.30+	.00	-.21	-.32++	.00		
NODULE	ABUND 1	.00	.00	.00	.00	.00	.00	.00		
NODULE	ABUND 2	.00	.00	.00	.00	.00	.00	.00		
NODULE	ACT. 1	.00	.00	.00	.00	.00	.00	.00		
NODULE	ACT. 2	.00	.00	.00	.00	.00	.00	.00		
PLANT	HEIGHT	.00	.13	.44+	.00	-.26+	.03	.00		
LODGING		.00	.00	.00	.00	.00	.00	.00		
SHATTER		1.00	.00	.00	.00	.00	.00	.00		
PLANTS	HARVEST	.00	1.00	-.05	.00	.11	.20	.00		
PODS PER	PLANT	.00	-.05	1.00	.00	-.27+	.14	.00		
POD	HEIGHT	.00	.00	.00	1.00	.00	.00	.00		
100 SEED	WEIGHT	.00	.11	-.27+	.00	1.00	-.03	.00		
QUALITY	OF SEED	.00	.20	-.14	.00	-.03	1.00	.00		
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	1.00		

TABLE 55

EXPERIMENT 105

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
16	CRAWFORD	1.00	213.25	54.00	8.75	15.45	2.00	.00	40.7	21.2
13	MITCHELL	1.00	200.00	46.35	10.00	17.08	2.25	.00	38.7	22.5
14	CLARK	1.00	210.75	37.60	7.25	17.65	2.00	.00	40.5	22.7
2	RILLITO	1.00	161.25	90.30	10.25	12.35	1.75	.00	41.6	21.1
11	FRANKLIN	1.00	207.00	42.03	9.75	16.70	1.50	.00	38.8	21.2
15	COLUMBUS	1.00	199.25	59.08	10.25	15.15	2.50	.00	41.5	20.0
8	DAVIS	1.00	163.75	85.15	8.75	14.30	1.50	.00	39.7	20.5
5	RANSON	1.00	182.50	60.95	10.50	15.73	1.75	.00	41.2	21.4
12	CUTLER 71	1.00	195.75	42.25	9.75	17.90	2.00	.00	39.9	21.8
4	WILLIAMS	1.00	196.50	25.45	5.50	16.95	1.75	.00	40.7	22.9
10	CALLAND	1.00	198.50	43.80	9.25	17.58	3.00	.00	37.7	21.1
1	IMPROVED PELICAN	1.00	157.00	101.15	16.25	13.28	2.25	.00	44.4	20.1
7	FORREST	1.00	204.50	69.40	9.00	11.30	2.25	.00	41.1	18.1
3	BOSSIER	1.00	187.50	76.50	14.25	14.75	2.25	.00	42.5	20.8
9	GASOY 17	1.00	182.50	96.15	11.00	17.03	4.00	.00	42.1	18.4
6	COBB	1.00	181.75	82.80	12.75	15.30	2.00	.00	39.7	20.8
	GRAND MEAN	1.00	190.11	63.31	10.20	15.53	2.17	.00		
	STANDARD ERROR OF A VARIETY MEAN	.00	7.90	3.45	.51	.53	.27	.00		
	COEFFICIENT OF VARIATION	.00%	8.31%	10.90%	10.04%	6.87%	24.70%	.00%		
	5% LSD VARIETY MEANS (*****=NS)	.00	22.51	9.83	1.46	1.52	.76	.00		
CORRELATIONS										
			(+ - PROBE=.05)			++ - PROBE=.01)				
YIELD	KG/HA	.00	.43++	-.30+	-.36++	.19	-.26+	.00		
DAYS TO FLOWER		.00	-.62++	.90++	.71++	-.51++	.12	.00		
DAYS TO MATURITY		.00	-.56++	.89++	.74++	-.44++	.18	.00		
NODULE ABUND 1		.00	.00	.00	.00	.00	.00	.00		
NODULE ABUND 2		.00	-.25+	.18	.07	-.16	-.07	.00		
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00		
NODULE ACT. 2		.00	-.12	.18	.36++	-.05	.19	.00		
PLANT HEIGHT		.00	-.62++	.83++	.68++	-.45++	.02	.00		
LODGING		.00	-.50++	.71++	.68++	-.29+	.13	.00		
SHATTER		1.00	.00	.00	.00	.00	.00	.00		
PLANTS HARVEST		.00	1.00	-.62++	-.35++	.36++	.03	.00		
PODS PER PLANT		.00	-.62++	1.00	.62++	-.52++	.19	.00		
POD HEIGHT		.00	-.35++	.62++	1.00	-.26+	.22	.00		
100 SEED WEIGHT		.00	.36++	-.52++	-.26+	1.00	.22	.00		
QUALITY OF SEED		.00	.03	.19	.22	.22	1.00	.00		
PERCENT GERM.		.00	.00	.00	.00	.00	.00	1.00		

TABLE 56

EXPERIMENT 126

YEAR 1978

REGION - AFRICA

SITE - SAKHA

LATITUDE - 31 DEG. N

COOPERATOR - ALI ABDEL AZIZ

DATE PLANTED - MAY 4, 1978

SOIL TYPE - CLAY LOAM, PH 8.0

FERTILIZER USED (KG/HA) - N 28.6, 53.6

NUMBER OF IRRIGATIONS - 8

LOCAL VARIETY - CLARK

COUNTRY - EGYPT

ELEVATION - 7 M

LONGITUDE - 31 DEG. E

DATE HARVESTED - AUGUST, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
11	MITCHELL	4488.40	39.75	113.75	.00	.00	.00	.00	106.75	1.00
13	COLUMBUS	4146.66	34.75	130.75	.00	.00	.00	.00	106.50	1.00
9	FRANKLIN	3992.46	33.00	106.00	.00	.00	.00	.00	103.25	1.00
8	CALLAND	3946.62	35.75	107.25	.00	.00	.00	.00	104.00	1.00
10	CUTLER 71	3934.12	36.50	111.50	.00	.00	.00	.00	101.25	1.00
12	CLARK	3904.95	39.75	115.50	.00	.00	.00	.00	103.75	1.00
3	WILLIAMS	3846.60	35.25	104.00	.00	.00	.00	.00	90.00	1.00
5	JAMES	3292.32	47.50	112.00	.00	.00	.00	.00	104.50	1.00
4	RANSOM	2950.59	74.50	165.25	.00	.00	.00	.00	97.25	2.25
6	FORREST	2237.95	60.25	158.75	.00	.00	.00	.00	95.00	1.25
1	RILLITO	1962.89	75.25	153.50	.00	.00	.00	.00	105.00	1.00
7	DAVIS	1587.82	68.00	164.00	.00	.00	.00	.00	101.00	2.00
2	BOSSIER	1500.30	73.50	161.75	.00	.00	.00	.00	93.75	3.00
GRAND MEAN		3214.75	50.29	131.08	.00	.00	.00	.00	100.92	1.35
STANDARD ERROR OF A VARIETY MEAN		319.50	.57	.98	.00	.00	.00	.00	3.93	.10
COEFFICIENT OF VARIATION		19.88%	2.26%	1.50%	.00%	.00%	.00%	.00%	7.79%	14.77%
5% LSD VARIETY MEANS (*****=NS)		916.40	1.63	2.81	.00	.00	.00	.00	*****	.29

C O R R E L A T I O N S										
					(+ - PROB=.05			++ - PROB=.01)		
YIELD	KG/HA	DAYS TO	FLOWER	DAYS TO	YIELD	KG/HA	DAYS TO	FLOWER	DAYS TO	FLOWER
DAYS TO	1.00	-.78++	1.00	-.73++	.00	.00	.00	.00	.00	.00
FLOWER	-.78++	1.00	.92++	1.00	.00	.00	.00	.00	.00	.00
DAYS TO	-.73++	.92++	1.00	.00	.00	.00	.00	.00	.00	.00
NODULE	.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00
ABUND 1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ABUND 2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ACT. 1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ACT. 2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
HEIGHT	.27+	.18	.17	.17	.00	.00	.00	.00	.00	.00
LODGING	-.57++	.69++	.70++	.70++	.00	.00	.00	.00	.00	.00
SHATTER	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
HARVEST	.35++	.38++	.34+	.34+	.00	.00	.00	.00	.00	.00
PLANT	.52++	.36++	.49++	.49++	.00	.00	.00	.00	.00	.00
PODS PER	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
HEIGHT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100 SEED	.79++	.80++	.79++	.79++	.00	.00	.00	.00	.00	.00
WEIGHT	.39++	.41++	.37++	.37++	.00	.00	.00	.00	.00	.00
QUALITY	.03	.24	.17	.17	.00	.00	.00	.00	.00	.00
OF SEED										
PERCENT										
GERM.										

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
11	MITCHELL	1.00	84.00	67.50	.00	18.10	2.25	61.25	35.6	24.2
13	COLUMBUS	1.00	155.75	34.25	.00	17.63	1.75	83.75	40.8	22.0
9	FRANKLIN	1.00	152.00	34.50	.00	18.08	1.75	81.25	40.1	20.5
8	CALLAND	1.00	173.00	40.50	.00	19.90	2.75	85.00	40.4	21.3
10	CUTLER 71	1.00	117.50	47.50	.00	21.15	2.25	78.75	39.6	22.5
12	CLARK	1.00	107.00	45.25	.00	19.55	2.00	68.75	40.1	22.1
3	WILLIAMS	1.00	151.00	36.50	.00	19.65	1.25	78.75	40.9	22.8
5	JAMES	1.00	130.50	59.75	.00	17.00	2.25	77.50	41.3	21.5
4	RANSOM	1.00	145.50	37.00	.00	15.55	2.25	77.50	37.1	24.8
6	FORREST	1.00	92.25	19.00	.00	13.78	2.75	73.75	37.3	20.8
1	RILLITO	1.00	89.25	28.75	.00	12.18	2.75	71.25	31.9	19.9
7	DAVIS	1.00	108.00	21.00	.00	13.00	2.50	76.25	37.4	22.0
2	BOSSIER	1.00	110.50	35.00	.00	13.00	2.50	71.25		
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05) ++ - PROB=.01)										
YIELD	KG/HA	.00	.35++	.52++	.00	.79++	-.39++	.03		
DAYS TO	FLOWER	.00	-.38++	-.36++	.00	-.80++	.41++	-.24		
DAYS TO	MATURITY	.00	-.34+	-.49++	.00	-.79++	.37++	-.17		
NODULE	ABUND 1	.00	.00	.00	.00	.00	.00	.00		
NODULE	ABUND 2	.00	.00	.00	.00	.00	.00	.00		
NODULE	ACT. 1	.00	.00	.00	.00	.00	.00	.00		
NODULE	ACT. 2	.00	.00	.00	.00	.00	.00	.00		
PLANT	HEIGHT	.00	-.08	.27+	.00	.24	.08	-.00		
LODGING		.00	-.08	-.25	.00	-.48++	.13	-.13		
SHATTER		1.00	.00	.00	.00	.00	.00	.00		
PLANTS	HARVEST	.00	1.00	-.05	.00	.35+	-.22	.63++		
PODS PER	PLANT	.00	-.05	1.00	.00	.51++	-.06	-.26		
FOD	HEIGHT	.00	.00	.00	1.00	.00	.00	.00		
100 SEED	WEIGHT	.00	.35+	.51++	.00	1.00	-.35+	.13		
QUALITY	OF SEED	.00	-.22	-.06	.00	-.35+	1.00	-.13		
PERCENT	GERM.	.00	.63++	-.26	.00	.13	-.13	1.00		

TABLE 57 EXPERIMENT 129 YEAR 1978

REGION - AFRICA COUNTRY - EGYPT
 SITE - SEDS ELEVATION - 48 M
 LATITUDE - 29 DEG. N LONGITUDE - 31 DEG E
 COOPERATOR - ALI ABDEL AZIZ
 DATE PLANTED - MAY 16, 1978 DATE HARVESTED - AUGUST, 1978
 FERTILIZER USED (KG/HA) - N 28.6, P 53.6
 SOIL TYPE - CLAY LOAM, PH 8.0
 NUMBER OF IRRIGATIONS - 9
 LOCAL VARIETY - CLARK

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOADING
11	CALLAND	1654.50	33.75	98.75	59.50	89.50	1.03	1.14	56.25	1.00
8	FORREST	1333.60	48.75	122.50	52.75	68.00	1.32	1.11	61.25	1.25
9	DAVIS	1308.59	70.00	138.75	38.25	67.75	.98	.88	113.75	1.75
2	RILLITO	1071.05	73.75	135.00	71.50	85.25	1.59	1.31	108.75	2.00
13	CUTLER 71	983.53	36.25	100.00	44.00	82.25	.75	1.01	68.75	1.00
14	MITCHELL	904.35	35.00	107.50	81.00	75.00	1.29	1.11	63.75	1.25
12	FRANKLIN	904.35	38.75	101.25	27.00	69.75	.64	.83	61.25	1.00
16	COLUMBUS	900.18	40.00	102.50	53.25	80.75	1.19	1.38	61.25	1.00
7	JAMES	871.01	50.00	112.50	93.25	84.50	1.56	1.12	78.75	1.00
15	CLARK	787.66	36.25	100.00	71.50	90.25	1.49	1.45	50.00	1.00
5	RANSOM	641.79	91.25	150.00	42.75	89.50	.90	1.07	93.75	1.75
4	IMPROVED PELICAN	612.62	35.00	101.25	31.00	81.75	1.03	1.14	55.00	3.00
1	GASOY 17	.00	98.75	175.00	22.50	58.50	.39	.67	127.50	3.00
10	COBB	.00	75.00	175.00	35.75	76.00	.76	1.06	116.25	2.25
6	BOSSIER	.00	73.75	175.00	17.00	50.00	.19	.38	88.75	2.00
3		.00	72.50	161.25	41.25	97.00	1.09	1.16	101.25	2.25
GRAND MEAN		748.33	56.80	128.52	48.89	77.86	1.01	1.05	81.64	1.53
STANDARD ERROR OF A VARIETY MEAN		135.98	1.00	3.93	16.05	16.35	.38	.31	6.83	.14
COEFFICIENT OF VARIATION		36.34%	3.52%	6.11%	65.66%	41.99%	76.14%	59.77%	16.72%	17.72%
5% LSD VARIETY MEANS (*****=NS)		387.32	2.85	11.19	*****	*****	*****	*****	19.44	.59

CORRELATIONS

(+ - PROB=.05 ++ - PROB=.01)

YIELD	KG/HA	1.00	-.52++	-.65++	.30+	.06	.30+	.18	-.39++	.60++
DAYS TO FLOWER		-.52++	1.00	.88++	-.24	-.12	-.19	-.18	.81++	.84++
DAYS TO MATURITY		-.65++	.88++	1.00	-.24	-.07	-.19	-.14	.80++	.85++
NODULE ABUND 1		.30+	-.24	-.24	1.00	.40++	.76++	.50++	-.15	-.25+
NODULE ABUND 2		.06	-.12	-.07	.40++	1.00	.44++	.69++	-.07	.13
NODULE ACT. 1		.30+	-.19	-.19	.76++	.44++	1.00	.84++	-.15	-.25+
NODULE ACT. 2		.18	-.18	-.14	.50++	.69++	.84++	1.00	-.13	-.20
PLANT		-.39++	.81++	.80++	-.15	-.07	-.15	-.13	1.00	.75++
LOADING		-.60++	.84++	.85++	-.25+	-.13	-.25+	-.20	.75++	1.00
SHATTER		.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST		.31+	-.37++	-.36++	.15	.16	.18	.21	-.26+	-.36++
PODS PER PLANT		.54++	-.11	-.23	.22	-.05	.18	.08	-.01	-.20
HEIGHT		.00	.00	.00	.00	.00	.00	.00	.00	.00
100 SEED WEIGHT		.80++	-.72++	-.87++	.26+	.11	.23	.18	-.65++	-.78++
QUALITY OF SEED		.00	.00	.00	.00	.00	.00	.00	.00	.00
PERCENT GERM.		.00	.00	.00	.00	.00	.00	.00	.00	.00

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
11	CALLAND	1.00	197.50	20.00	.00	14.70	.00	.00	42.4	19.2
8	FORREST	1.00	192.00	38.35	.00	16.50	.00	.00	42.5	19.3
9	DAVIS	1.00	193.75	39.60	.00	12.93	.00	.00	42.8	19.3
2	RILLITO	1.00	194.50	34.85	.00	10.83	.00	.00	44.4	19.2
13	CUTLER 71	1.00	195.50	32.90	.00	15.55	.00	.00	41.6	20.9
14	MITCHELL	1.00	199.50	26.50	.00	13.18	.00	.00	39.7	21.2
12	FRANKLIN	1.00	197.50	13.00	.00	14.35	.00	.00	40.5	21.3
16	COLUMBUS	1.00	186.00	20.80	.00	12.98	.00	.00	40.5	22.4
7	JAMES	1.00	194.25	26.80	.00	11.48	.00	.00	42.2	21.3
15	CLARK	1.00	200.25	23.90	.00	14.73	.00	.00	42.1	21.2
5	RANSOM	1.00	194.25	25.20	.00	10.58	.00	.00	43.1	22.1
4	WILLIAMS	1.00	203.00	22.35	.00	12.58	.00	.00	41.5	21.2
10	IMPROVED PELICAN	1.00	179.50	15.45	.00	.00	.00	.00		
6	GASOY 17	1.00	190.50	13.35	.00	.00	.00	.00		
3	COBB	1.00	187.25	14.55	.00	.00	.00	.00		
	BOSSIER	1.00	185.75	14.35	.00	.00	.00	.00		
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
NODULE HEIGHT										
PLANT LODGING										
SHATTER										
HARVEST										
PLANTS										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 58 EXPERIMENT 111 YEAR 1978

REGION - AFRICA
 SITE - SHEBIN EL KOM
 LATITUDE - 32 DEG. N
 COOPERATOR - DR.M.N. SHATLA
 DATE PLANTED - MAY 15, 1978
 COUNTRY - EGYPT
 LONGITUDE - 31 DEG. E
 DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	ABUND 1	ABUND 2	MODULE ACT. 1	MODULE ACT. 2	PLANT HEIGHT	LODGING
8	DAVIS	4271.69	90.00	194.00	.00	.00	46.75	54.00	137.10	3.00
9	GASOY 17	3979.96	90.00	199.00	.00	.00	59.00	9.00	127.23	4.00
15	COLUMBUS	3979.96	48.00	150.00	.00	.00	66.25	94.00	125.23	2.50
2	RILLITO	3896.61	76.75	202.00	.00	.00	50.00	87.50	161.85	4.50
13	MITCHELL	3667.40	46.00	150.00	.00	.00	25.00	47.00	114.78	3.50
7	FORREST	3646.56	61.00	154.00	.00	.00	25.00	49.75	126.68	2.50
10	CALLAND	3521.54	46.00	150.00	.00	.00	47.25	95.25	107.25	3.75
5	RANSOM	3500.70	72.00	202.00	.00	.00	53.50	27.25	129.48	1.75
16	CRAWFORD	3479.86	54.00	150.00	.00	.00	4.25	78.50	123.78	1.75
6	COBB	3438.19	96.50	199.50	.00	.00	41.75	50.75	130.83	3.25
3	ROSSIER	3188.14	85.50	202.00	.00	.00	65.00	23.50	163.90	3.75
14	BRAGG	3042.27	91.50	202.00	.00	.00	.00	68.00	121.20	4.00
4	WILLIAMS	3000.60	46.00	202.00	.00	.00	50.00	30.50	98.72	1.50
11	FRANKLIN	2854.74	46.00	150.00	.00	.00	33.25	89.75	119.65	3.25
12	CUTLER 71	2667.20	46.00	150.00	.00	.00	50.75	66.75	112.13	3.75
1	IMPROVED PELICAN	1937.89	112.00	202.00	.00	.00	8.25	25.00	204.33	5.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		3379.58	69.20	178.66	.00	.00	39.13	55.78	131.51	3.23
COEFFICIENT OF VARIATION		369.81	2.77	1.27	.00	.00	21.21	17.64	5.04	.35
5% LSD VARIETY MEANS (*****=NS)		1053.39	8.00%	1.42%	.00%	.00%	108.41%	63.24%	7.67%	21.78%
			7.88	3.62	.00	.00	*****	50.24	14.36	1.00
C O R R E L A T I O N S										
			(+ - PROB=.05		++ - PROB=.01)					
YIELD	KG/HA	1.00								
DAYS TO	FLOWER	-0.10								
DAYS TO	MATURITY	1.00								
MODULE	ABUND 1	.00								
MODULE	ABUND 2	.00								
MODULE	ACT. 1	.17								
MODULE	ACT. 2	-0.00								
PLANT	HEIGHT	-0.13								
LODGING	SHATTER	-0.02								
PLANTS	HARVEST	.15								
PODS PER	PLANT	-0.07								
FOOD	HEIGHT	-0.39++								
100 SEED	WEIGHT	.06								
QUALITY	OF SEED	-0.02								
PERCENT	GERM.	-0.02								

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
8	DAVIS	1.00	113.25	65.25	6.53	17.58	1.00	84.00	41.5	21.7
9	GASOY 17	2.00	93.50	61.75	10.30	19.98	1.00	90.00	42.3	20.4
15	COLUMBUS	1.00	120.00	59.00	15.83	17.98	2.00	78.00	43.1	22.5
2	RILLITO	1.25	70.75	64.75	8.90	17.78	1.00	76.00	44.5	21.9
13	MITCHELL	1.50	117.00	45.00	12.68	18.45	2.00	56.00	39.0	23.7
7	FORREST	1.00	100.25	75.50	7.73	16.83	2.00	70.00	41.7	22.0
10	CALLAND	2.25	124.00	48.75	10.23	19.23	2.00	64.00	41.9	21.4
5	RANSOM	1.00	83.75	39.00	9.18	20.18	2.00	58.00	41.9	23.3
16	CRAWFORD	1.00	90.50	52.75	12.43	18.78	1.00	86.00	41.8	24.1
6	COBB	1.00	75.75	48.00	10.85	19.73	1.00	88.00	41.4	20.0
3	BOSSIER	2.00	75.25	81.50	11.05	19.50	1.00	100.00	43.1	21.8
14	BRAGG	1.00	78.00	67.25	9.80	21.73	2.00	78.00	42.9	20.5
4	WILLIAMS	1.00	116.75	31.75	7.03	18.75	1.00	62.00	41.9	24.9
11	FRANKLIN	2.50	143.25	34.50	12.43	18.20	2.00	54.00	38.8	24.1
12	CUTLER 71	1.50	135.25	46.75	14.90	18.95	2.00	60.00	42.7	22.0
1	IMPROVED PELICAN	1.00	67.75	154.50	47.78	16.55	1.00	100.00	42.8	22.2

GRAND MEAN
STANDARD ERROR OF A VARIETY MEAN
COEFFICIENT OF VARIATION
5% LSD VARIETY MEANS (*****=NS)

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C O R R E L A T I O N S

(+ - PROB=.05
++ - PROB=.01)

YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA
DAYS TO FLOWER	-.02	.15	-.07	-.39++	.06	-.02	-.54++	-.75++	.49++	.00
DAYS TO MATURITY	-.24	-.63++	.51++	.31+	.06	-.61++	.00	.00	.00	.00
NODULE ABUND 1	-.25+	-.56++	.24	.06	.00	.00	.00	.00	.00	.00
NODULE ABUND 2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1	.14	.10	-.16	-.22	.02	-.04	.27+	-.22	.65++	.30+
NODULE ACT. 2	.08	.28+	-.14	-.22	.19	-.45++	.09	.17	.53++	.55++
LODGING	-.16	-.48++	.65++	.52++	-.19	.45++	.16	.32++	.32++	.03
SHATTER	.20	-.14	.37++	.32+	.06	.06	.16	.17	.71++	1.00
HARVEST	1.00	1.00	-.35++	-.18	.04	.41++	.26+	.53++	.71++	1.00
PLANTS PER POD	-.13	-.35++	1.00	.44++	-.18	-.26+	.12	.09	.03	.00
PLANTS PER POD	-.06	-.18	.44++	1.00	-.24	1.00	.09	.03	.03	.00
100 SEED WEIGHT	.04	-.23	-.18	-.24	1.00	1.00	.09	.03	.03	.00
QUALITY OF SEED	.16	-.41++	-.26+	-.12	.09	1.00	.09	.03	.03	.00
PERCENT GERM.	-.17	-.53++	.55++	.32++	-.03	-.71++	1.00	.03	.03	.00

TABLE 59 EXPERIMENT 117

YEAR 1978

REGION - AFRICA
 SITE - AWASSA
 LATITUDE - 6 DEG. 25 MIN. N
 COOPERATOR - GASHAHUN WOLDIE
 DATE PLANTED - JUNE 20, 1978
 SOIL TYPE - LOAMY
 FERTILIZER USED (KG/HA) - N 18.0, P 46.0

COUNTRY - ETHIOPIA
 ELEVATION - 1700 M
 LONGITUDE - 38 DEG. 15 MIN. E
 DATE HARVESTED - OCTOBER 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
4	WILLIAMS	3031.86	46.00	116.00	4.00	3.75	90.00	70.00	46.50	2.75
14	MITCHELL	2838.07	46.00	113.00	4.25	4.25	96.25	72.50	46.10	2.50
5	RANSOM	2790.14	49.00	118.00	4.00	4.00	83.75	82.50	39.98	1.00
2	RILLITO	2667.20	55.00	123.00	4.00	4.25	87.50	78.75	60.85	3.50
13	CUTLER 71	2517.17	46.00	115.25	4.25	4.50	88.75	73.75	52.50	3.50
11	CALLAND	2431.74	47.00	115.00	4.25	4.25	90.00	96.25	48.25	2.25
6	COBB	2346.30	62.00	132.00	4.50	4.25	77.50	93.75	63.05	2.25
16	COLUMBUS	2154.60	47.00	114.00	4.25	3.75	95.00	92.50	59.80	2.75
9	DAVIS	2092.08	67.00	137.00	4.00	4.50	92.50	98.75	68.90	3.00
7	JAMES	2079.58	52.00	122.00	4.00	4.25	95.00	96.25	55.60	3.25
8	FORREST	1879.54	55.00	125.00	5.00	5.00	87.50	95.00	61.80	2.75
1	IMPROVED PELICAN	1616.99	85.00	154.00	5.00	5.00	95.00	82.50	121.60	3.00
3	BOSSIER	1404.45	63.00	132.00	4.25	4.00	78.75	85.00	66.35	2.75
10	GASOY 17	1250.25	49.00	118.00	4.75	4.25	82.50	95.00	44.70	2.00
12	FRANKLIN	1223.16	45.00	112.00	4.75	4.75	88.75	68.75	37.85	1.00
15	BROGG	1112.72	52.00	122.00	4.75	4.75	91.25	88.75	50.55	2.50
GRAND MEAN		2089.74	54.13	123.02	4.38	4.34	88.75	84.38	57.77	2.55
STANDARD ERROR OF A VARIETY MEAN		190.08	.00	.19	.17	.27	3.99	5.72	3.55	.44
COEFFICIENT OF VARIATION		18.19%	.00%	.30%	7.90%	12.22%	8.99%	13.56%	12.28%	34.54%
5% LSD VARIETY MEANS (*****=NS)		541.44	.00	.53	.49	.76	11.37	16.29	10.10	1.25

CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
1.00	-.25	-.24	-.49++	-.22	.03	-.04	-.18	.01
-.25	1.00	.99++	.23	.26+	-.01	-.07	.88++	.20
-.24	-.24	1.00	.21	.25+	-.03	-.05	.86++	.21
-.49++	.23	.21	1.00	.46++	.02	-.09	.22	-.03
-.22	.26+	.25+	.46++	1.00	.16	.06	.07	.07
.03	-.01	-.03	.02	.16	1.00	-.18	.17	.14
-.04	-.07	-.05	-.09	.06	-.18	1.00	-.19	.16
-.18	.88++	.86++	.22	.23	.17	-.19	1.00	.31+
.01	.20	.21	-.03	.07	.14	.16	.31+	1.00
.00	.00	.00	.00	.00	.00	.00	.00	.00
.34++	-.48++	-.48++	-.17	-.25+	.10	-.18	-.41++	-.20
.09	.51++	.47++	.02	.14	.12	-.28+	.56++	.09
-.18	.65++	.65++	.01	.15	.19	-.23	.68++	.20
.32++	-.60++	-.56++	-.36++	-.28+	-.08	.25+	-.59++	.03
-.34++	.29+	.31+	.31+	.09	-.17	.03	.35++	.22
.30+	.15	.13	-.09	-.08	-.03	.01	.16	-.06

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
4	WILLIAMS	.00	311.25	20.50	7.65	20.13	2.00	96.00
14	MITCHELL	.00	284.25	23.25	6.75	19.78	1.00	98.00
5	RANSOM	.00	309.75	16.50	9.40	20.03	1.00	98.00
2	RILLITO	.00	257.75	24.00	8.85	19.53	2.00	96.00
13	CUTLER 71	.00	320.50	26.75	9.20	19.75	3.00	91.75
11	CALLAND	.00	309.00	22.25	7.65	20.55	2.00	100.00
6	COBB	.00	274.75	20.50	8.60	18.08	3.00	100.00
16	COLUMBUS	.00	288.00	28.25	7.15	18.85	3.00	96.00
9	DAVIS	.00	270.25	22.50	9.90	18.35	1.00	98.00
7	JAMES	.00	308.25	18.75	10.00	19.05	1.00	100.00
8	FORREST	.00	228.75	17.00	6.50	19.65	3.00	100.00
1	IMPROVED PELICAN	.00	250.00	44.25	18.35	13.30	3.00	100.00
3	BOSSIER	.00	234.00	27.50	10.20	19.10	4.00	94.00
10	GASOY 17	.00	278.00	13.50	6.85	19.60	2.00	98.00
12	FRANKLIN	.00	328.25	18.50	6.25	15.50	1.00	98.00
15	BRAGG	.00	238.25	11.00	9.65	19.93	4.00	74.00
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN		.00	280.69	22.19	8.93	18.82	2.25	96.11
COEFFICIENT OF VARIATION		.00	12.95	3.32	1.33	.51	.00	.06
5% LSD VARIETY MEANS (*****=NS)		.00	9.23%	29.94%	29.80%	5.47%	.00%	.13%
		.00	36.90	9.46	3.79	1.47	.00	.18
C O R R E L A T I O N S								
			(+ - PROB=.05			+ + - PROB=.01)		
YIELD	KG/HA	.00	.34++	.09	-.18	.32++	-.34++	.30+
DAYS TO FLOWER		.00	-.48++	.51++	.65++	-.60++	.29+	.15
DAYS TO MATURITY		.00	-.48++	.47++	.65++	-.56++	.31+	.13
NODULE ABUND 1		.00	-.17	.02	.01	-.36++	.31+	-.09
NODULE ABUND 2		.00	-.25+	.14	.15	-.28+	.09	-.08
NODULE ACT. 1		.00	.10	.12	.19	-.08	-.17	-.03
NODULE ACT. 2		.00	-.18	-.28+	-.23	.25+	.03	.01
PLANT HEIGHT		.00	-.41++	.56++	.68++	-.59++	.35++	.16
LOGGING		.00	-.20	.09	.20	.03	.22	-.06
SHATTER		1.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST		.00	1.00	.00	-.27+	.02	-.50++	.23
PODS PER PLANT		.00	.00	1.00	.26+	-.45++	.17	.25+
POD WEIGHT		.00	-.27+	.26+	1.00	-.47++	.19	-.01
100 SEED WEIGHT		.00	.02	-.45++	-.47++	1.00	-.01	-.22
QUALITY OF SEED		.00	-.50++	.17	.19	-.01	1.00	-.52++
PERCENT GERM.		.00	.23	.25+	-.01	-.22	-.52++	1.00

TABLE 60 EXPERIMENT 130 YEAR 1978

REGION - AFRICA
 SITE - DEBRE-ZEIT
 LATITUDE - 9 DEG. N
 COOPERATOR - ALEMU MENGISTU

COUNTRY - ETHIOPIA
 ELEVATION - 1860 M
 LONGITUDE - 39 DEG. E

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEULE ABUND 1	NODEULE ABUND 2	NODEULE ACT. 1	NODEULE ACT. 2	PLANT HEIGHT	LONGING
16	CRAWFORD	2004.57	.00	.00	1.50	.00	78.75	.00	63.25	1.25
2	RILLITO	1961.64	.00	.00	1.75	.00	82.50	.00	63.25	1.00
11	CALLAND	1952.47	.00	.00	2.50	.00	87.50	.00	45.50	1.00
8	FORREST	1839.12	.00	.00	4.00	.00	81.25	.00	59.50	1.00
14	MITCHELL	1786.19	.00	.00	3.50	.00	85.00	.00	48.00	1.00
7	JAMES	1749.93	.00	.00	1.75	.00	90.00	.00	58.25	1.00
13	CUTLER 71	1726.18	.00	.00	1.25	.00	80.00	.00	53.25	1.00
4	WILLIAMS	1724.09	.00	.00	1.50	.00	76.25	.00	40.50	1.00
15	BRAGG	1707.01	.00	.00	3.25	.00	100.00	.00	59.25	1.00
3	ROSSIER	1700.76	.00	.00	2.00	.00	77.50	.00	71.25	2.50
6	COBB	1614.49	.00	.00	2.50	.00	88.75	.00	63.75	1.00
9	DAVIS	1399.86	.00	.00	2.25	.00	91.25	.00	72.75	1.50
5	RANSOM	1370.69	.00	.00	1.50	.00	73.75	.00	42.50	1.00
12	FRANKLIN	1229.83	.00	.00	3.00	.00	70.00	.00	40.50	1.00
10	GASOY 17	1198.16	.00	.00	2.25	.00	83.75	.00	51.25	1.00
1	IMPROVED PELICAN	891.01	.00	.00	4.00	.00	88.75	.00	83.00	3.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		1616.00	.00	.00	2.41	.00	83.44	.00	57.23	1.27
COEFFICIENT OF VARIATION		177.91	.00	.00	.38	.00	5.07	.00	2.21	.15
5% LSD VARIETY MEANS (*****=NS)		22.02%	.00%	.00%	31.70%	.00%	12.15%	.00%	7.72%	23.42%
		506.76	.00	.00	1.09	.00	14.44	.00	6.30	.42

CORRELATIONS

(+ - PROB=.05 ++ - PROB=.01)

YIELD	KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEULE ABUND 1	NODEULE ABUND 2	NODEULE ACT. 1	NODEULE ACT. 2	PLANT HEIGHT	LONGING
YIELD	1.00	.00	.00	.00	.00	.00	.00	.00	.00
DAYS TO FLOWER	.00	1.00	.00	.00	.00	.00	.00	.00	.00
DAYS TO MATURITY	.00	.00	1.00	.00	.00	.00	.00	.00	.00
NODEULE ABUND 1	.00	.00	.00	1.00	.00	.37++	.00	.14	.16
NODEULE ABUND 2	.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODEULE ACT. 1	.00	.00	.00	.37++	.00	1.00	.00	.18	.09
NODEULE ACT. 2	.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANT HEIGHT	.01	.00	.00	.14	.00	.18	.00	1.00	.70++
LONGING	-.28+	.00	.00	.16	.00	.09	.00	.70++	1.00
SHATTER	.00	.00	.00	.00	.00	.00	.00	.00	.00
HARVEST	.15	.00	.00	.20	.00	.32++	.00	.42++	.30+
PLANTS PER FODS PER	.19	.00	.00	-.03	.00	.13	.00	.24	-.02
FOOD	-.23	.00	.00	.30+	.00	.18	.00	.78++	.76++
100 SEED WEIGHT	.28+	.00	.00	-.18	.00	-.11	.00	-.64++	-.59++
QUALITY OF SEED	-.11	.00	.00	.02	.00	.06	.00	.11	.10
PERCENT GERM.	-.15	.00	.00	-.40++	.00	-.26+	.00	-.03	.30+

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
16	CRAWFORD	1.00	103.75	54.50	3.75	13.48	3.50	91.75		
2	RILLITO	1.00	98.75	51.25	4.00	14.13	2.25	84.50	43.7	17.4
11	CALLAND	1.00	117.75	44.50	3.75	14.95	2.75	89.75	45.8	15.5
8	FORREST	1.00	90.50	52.00	6.25	13.65	3.25	51.25	42.9	16.1
14	MITCHELL	1.00	70.50	42.00	4.25	14.40	3.25	82.00	41.9	14.6
7	JAMES	1.00	106.75	45.50	5.00	13.98	3.25	80.25	43.0	14.4
13	CUTLER 71	1.00	93.75	43.00	2.25	14.98	3.00	95.75	43.5	14.8
4	WILLIAMS	1.00	83.75	32.00	3.00	15.85	2.00	94.00	44.5	16.3
15	BAGG	1.00	131.00	31.50	6.00	16.28	2.25	63.50	44.3	14.2
3	BOSSIER	1.00	96.50	42.25	12.25	11.03	2.25	96.25	41.0	17.6
6	COBE	1.00	105.00	52.50	8.00	11.70	2.50	79.50	42.2	16.2
9	DAVIS	1.00	117.75	45.75	9.00	12.10	2.25	82.75	42.9	15.8
5	RANSOM	1.00	98.75	43.50	3.50	15.48	3.50	89.50	41.3	14.7
12	FRANKLIN	1.00	91.50	41.00	3.00	13.83	2.00	88.50	42.9	14.6
10	GASOY 17	1.00	97.00	35.50	3.75	14.45	1.75	86.25	43.0	13.0
1	IMPROVED PELICAN	1.00	130.00	43.50	13.25	10.85	3.75	96.25	43.3	18.8

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GRAND MEAN
STANDARD ERROR OF A VARIETY MEAN
COEFFICIENT OF VARIATION
5% LSD VARIETY MEANS (*****=NS)

++ - PROB=.01)

(+ - PROB=.05

C O R R E L A T I O N S

YIELD	KG/HA	.00	.15	.19	-.23	.28+	-.11	-.15		
DAYS TO	FLOWER	.00	.00	.00	.00	.00	.00	.00		
DAYS TO	MATURITY	.00	.00	.00	.00	.00	.00	.00		
NODULE	ABUND 1	.00	.20	-.03	.30+	-.18	.02	-.40++		
NODULE	ABUND 2	.00	.00	.00	.00	.00	.00	.00		
NODULE	ACT. 1	.00	.32++	-.13	.18	-.11	.06	-.26+		
NODULE	ACT. 2	.00	.00	.00	.00	.00	.00	.00		
PLANT	HEIGHT	.00	.42++	.24	.78++	-.64++	.11	-.03		
LODGING	SHATTER	.00	.30+	-.02	.76++	-.59++	.10	.30+		
PLANTS	HARVEST	1.00	.00	.00	.00	.00	.00	.00		
PODS PER	PLANT	.00	1.00	-.07	.36++	-.20	-.10	-.03		
FOD	HEIGHT	.00	-.07	1.00	.09	-.34++	.23	-.10		
100 SEED	WEIGHT	.00	.36++	.09	1.00	-.70++	.06	.05		
QUALITY	OF SEED	.00	-.20	-.34++	-.70++	1.00	-.06	-.18		
PERCENT	GERM.	.00	-.10	.23	.06	-.06	1.00	.05		
		.00	-.03	-.10	.05	-.18	.05	1.00		

TABLE 61 EXPERIMENT 19 YEAR 1978

REGION - AFRICA COUNTRY - GABON
 SITE - NTOUM
 LATITUDE - 0 DEG. 20 MIN. N LONGITUDE - 9 DEG. 45 MIN. E
 COOPERATORS - VAN AMERONGEN, VAN DE PLAS
 DATE PLANTED - MARCH 23, 1978 DATE HARVESTED - JUNE, 1978
 SOIL TYPE - SAND 22%, SILT 63.5%, CLAY 14.5%, PH 6.4
 FERTILIZER USED (KG/HA) - N 30.0, P 30.0, K 60.0
 AMOUNT OF MOISTURE - 448 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
11	RILLITO	2154.60	32.50	90.50	.00	.00	.00	.00	54.23	1.75
4	HARDEE LS	2071.25	40.00	113.75	.00	.00	.00	.00	64.75	1.00
8	CARIBE	1971.23	38.25	114.50	.00	.00	.00	.00	74.60	2.50
15	COBB	1868.25	30.00	97.75	.00	.00	.00	.00	38.78	1.00
10	IMPROVED PELICAN	1860.79	34.75	95.25	.00	.00	.00	.00	60.40	1.75
12	BOSSIER	1831.62	36.25	100.25	.00	.00	.00	.00	53.30	1.75
3	SJ-2	1744.10	35.50	94.75	.00	.00	.00	.00	60.28	2.00
9	JUPITER	1708.67	40.00	102.00	.00	.00	.00	.00	67.78	1.25
13	WILLIAMS	1685.75	32.25	90.25	.00	.00	.00	.00	41.08	1.25
6	IAC-2	1669.08	34.25	105.25	.00	.00	.00	.00	62.03	1.25
1	CH-3	1631.58	35.50	105.50	.00	.00	.00	.00	73.50	3.00
14	RANSOM	1583.65	31.75	93.75	.00	.00	.00	.00	37.30	1.00
2	UFV-1	1579.48	34.00	103.25	.00	.00	.00	.00	44.60	1.00
5	ORBA	1523.22	31.75	93.75	.00	.00	.00	.00	56.93	2.00
7	TUNIA	1260.67	31.50	103.75	.00	.00	.00	.00	48.55	1.50
16	GASOY 17	1043.96	30.75	89.75	.00	.00	.00	.00	37.18	1.00
GRAND MEAN		1699.24	34.31	99.63	.00	.00	.00	.00	54.70	1.56
STANDARD ERROR OF A VARIETY MEAN		195.15	.94	1.75	.00	.00	.00	.00	5.48	.26
COEFFICIENT OF VARIATION		22.97%	5.48%	3.52%	.00%	.00%	.00%	.00%	20.04%	33.56%
5% LSD VARIETY MEANS (*****=NS)		555.88	2.68	4.99	.00	.00	.00	.00	15.61	.75
CORRELATIONS										
			(+ - PROB=.05		++ - PROB=.01)					
YIELD	KG/HA	1.00	.21	.21	.00	.00	.00	.00	.48++	.20
DAYS TO FLOWER		.21	1.00	.55++	.00	.00	.00	.00	.54++	.18
DAYS TO MATURITY		.21	.55++	1.00	.00	.00	.00	.00	.51++	.16
NODULE ABUND 1		.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	1.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANT		.48++	.54++	.51++	.00	.00	.00	.00	1.00	.00
LODGING		.20	.18	.16	.00	.00	.00	.00	.52++	1.00
SHATTER		.00	.00	.00	.00	.00	.00	.00	.00	.00
HARVEST		.23	-.18	-.25+	.00	.00	.00	.00	.00	.00
PLANTS		.35++	.44++	.46++	.00	.00	.00	.00	.00	.00
PODS PER PLANT		.00	.00	.00	.00	.00	.00	.00	.00	.00
POD		.23	.21	.20	.00	.00	.00	.00	.00	.00
100 SEED WEIGHT		.09	-.10	-.10	.00	.00	.00	.00	.06	-.30+
QUALITY OF SEED		.00	.00	.00	.00	.00	.00	.00	.00	.03
PERCENT GERM.		.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 61 EXPERIMENT 19 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	FODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
11	RILLITO	.00	177.00	25.83	.00	17.90	2.00	.00	44.6	21.7
4	HARDEE LS	.00	150.00	36.30	.00	20.80	1.75	.00	44.7	24.9
8	CARIBE	.00	161.00	54.18	.00	16.58	2.00	.00	47.9	20.4
15	COBB	.00	187.50	19.78	.00	18.53	2.00	.00	41.4	24.6
10	IMPROVED PELICAN	.00	159.00	32.13	.00	17.95	2.00	.00	46.6	23.7
12	BOSSIER	.00	162.50	23.00	.00	18.98	2.50	.00	45.0	23.5
3	SJ-2	.00	161.75	30.40	.00	16.58	2.50	.00	44.4	23.4
9	JUPIER	.00	126.75	40.75	.00	21.98	1.50	.00	44.6	24.6
13	WILLIAMS	.00	177.25	14.55	.00	20.98	2.75	.00	43.5	24.7
6	IAC-2	.00	140.50	29.05	.00	20.53	2.00	.00	47.0	22.7
1	CH-3	.00	157.75	40.40	.00	16.63	2.25	.00	45.0	23.8
14	RANSOM	.00	170.00	15.30	.00	18.80	2.00	.00	42.9	26.8
2	UFV-1	.00	154.00	24.78	.00	17.68	2.50	.00	42.7	22.7
5	ORBA	.00	199.75	22.63	.00	16.05	2.00	.00	45.1	20.9
7	TUNIA	.00	83.75	33.28	.00	21.43	2.50	.00	43.6	24.7
16	GASDY 17	.00	157.75	13.25	.00	16.90	1.50	.00	41.7	22.5
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT LODGING										
SHATTER										
PLANTS HARVEST										
FODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 62 EXPERIMENT 8 YEAR 1978

REGION - AFRICA
 SITE - KUMASI
 LATITUDE - 6 DEG. 41 MIN. N
 COOPERATOR - HECTOR MERCER-QUARSHIE
 DATE PLANTED - MAY 17, 1978
 SOIL TYPE - SILT, PH 6.3
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 1207 MM
 SUBSTITUTE VARIETY - HARDEE

COUNTRY - GHANA
 ELEVATION - 270 M
 LONGITUDE - 1 DEG. 42 MIN. W
 DATE HARVESTED - SEPTEMBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
2	UFV-1	1815.78	32.75	105.75	4.00	3.75	90.00	85.00	52.75	1.50
13	ROSSIER	1783.27	31.00	101.25	3.75	3.75	81.25	83.75	63.50	2.50
6	IAC-2	1727.43	31.00	107.00	4.00	4.00	88.75	75.00	71.50	2.25
4	HARDEE LS	1678.25	41.00	110.00	3.25	3.75	90.00	92.50	70.50	1.50
7	TUNIA	1533.64	24.50	107.75	4.00	4.00	98.75	100.00	53.25	1.25
5	ORBA	1465.71	31.00	98.50	3.25	3.50	92.50	97.50	63.50	2.75
10	IMPROVED PELICAN	1444.87	31.00	99.50	3.50	3.75	90.00	85.00	71.50	2.25
16	HARDEE	1382.36	22.00	96.00	3.50	4.00	98.75	97.50	45.50	1.25
12	RILLITO	1256.50	23.25	82.00	4.00	3.75	92.50	93.75	55.00	1.50
9	JUPITER	1237.33	42.00	104.50	4.00	3.50	93.75	96.25	78.25	2.50
15	RANSOM	1236.08	23.00	87.00	3.75	4.00	95.00	93.75	40.25	1.25
3	SJ-2	1205.24	33.00	104.50	3.75	4.00	87.50	83.75	65.75	2.50
14	WILLIAMS	1117.72	20.00	75.00	2.50	4.00	93.75	95.00	54.00	1.00
1	CH-3	1070.21	30.00	108.75	3.00	2.75	91.25	90.00	81.25	3.50
11	KAHALA	853.09	23.00	75.00	1.50	3.50	91.25	91.25	48.50	1.25
8	CARIBE	841.83	37.00	131.00	3.75	4.00	95.00	92.50	82.50	3.25
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
(+ - PROB=.05 ++ - PROB=.01) (+ - PROB=.05 ++ - PROB=.01)										

C O R R E L A T I O N S

YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA
DAYS TO FLOWER	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DAYS TO MATURITY	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15
NODULE ABUND 1	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11
NODULE ABUND 2	.29	.29	.29	.29	.29	.29	.29	.29	.29	.29	.29
NODULE ACT. 1	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
NODULE ACT. 2	.19	.19	.19	.19	.19	.19	.19	.19	.19	.19	.19
PLANT HEIGHT	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02
LOGGING	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02
SHATTER	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
HARVEST	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16
PLANT	.26	.26	.26	.26	.26	.26	.26	.26	.26	.26	.26
PODS PER	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39
HEIGHT	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37
100 SEED	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37
WEIGHT	.47	.47	.47	.47	.47	.47	.47	.47	.47	.47	.47
QUALITY OF SEED	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02
PERCENT	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02
GERM.	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02

TABLE 62 EXPERIMENT 8 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
2	UFV-1	1.00	168.25	20.00	17.75	19.00	1.50	62.75	45.7	22.3
13	BOSSIER	1.00	197.75	27.50	19.00	21.00	1.75	60.00	44.2	23.2
6	IAC-2	1.00	165.00	24.25	21.25	19.75	1.50	57.75	43.8	23.2
4	HARDEE LS	1.00	86.25	48.00	16.75	17.75	2.00	61.75	44.5	22.9
7	TUNIA	1.00	71.50	32.50	13.75	20.75	2.00	93.50	45.7	21.5
5	OREA	1.00	196.25	20.75	17.25	18.00	1.75	75.50	44.5	20.6
10	IMPROVED PELICAN	1.00	199.25	22.25	18.50	19.75	1.25	64.00	46.4	22.0
16	HARDEE	1.00	194.25	24.00	10.25	21.00	1.50	57.00	43.0	22.4
12	RILLITO	1.00	176.75	29.25	11.00	19.50	1.25	55.25	45.5	21.7
9	JUPITER	1.00	143.00	37.25	20.50	20.25	2.50	77.25	43.6	20.4
15	RANSOM	1.00	195.75	24.00	9.50	19.50	1.75	60.50	42.5	24.7
3	SJ-2	1.00	136.25	24.25	17.00	17.00	1.75	80.25	44.1	21.7
14	WILLIAMS	1.00	238.25	18.00	10.25	18.25	1.00	57.00	43.7	21.8
1	CH-3	1.00	153.00	25.25	17.00	17.75	2.00	66.50	44.9	20.2
11	KAHALA	1.00	219.50	20.50	13.75	19.00	2.00	73.75	45.6	18.4
8	CARIBE	1.00	190.00	24.75	10.00	13.00	3.50	75.00	47.2	19.0
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
NODULE HEIGHT										
PLANT LODGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 63 EXPERIMENT 23

YEAR 1978

REGION - AFRICA
SITE - KUNASICOUNTRY - GHANA
ELEVATION - 270 M
LONGITUDE - 1 DEG. 36 MIN. W

LATITUDE - 6 DEG. 42 MIN. N

COOPERATOR - Y.B. NIMOH

DATE PLANTED - MAY 22, 1978

DATE HARVESTED - SEPTEMBER 1978

SOIL TYPE - SAND 59.2%, SILT 12.0%, CLAY 7.8%, PH 5.0

FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
11	KILLITO	1122.31	26.00	8.00	2.75	3.25	97.50	93.75	41.53	1.50
6	IAC-2	1097.30	32.00	24.75	3.75	3.75	96.25	88.75	54.53	1.00
3	SJ-2	1021.45	34.25	18.00	3.75	3.25	100.00	93.75	53.65	2.25
9	JUPITER	997.28	45.00	35.50	3.25	2.50	92.50	73.75	64.20	1.25
10	IMPROVED PELICAN	963.53	33.50	15.00	3.25	2.75	96.25	87.50	56.20	1.50
12	BOSSIER	955.19	33.00	13.50	3.75	3.50	97.50	92.50	50.40	1.50
7	TUNIA	765.15	28.00	23.50	4.00	4.00	95.00	95.00	43.23	1.00
5	ORBA	747.23	32.00	11.00	2.75	3.25	96.25	91.25	52.33	1.75
1	CH-3	695.14	33.00	22.50	3.25	3.50	100.00	94.25	60.45	1.75
4	HARDEE LS	692.22	44.00	42.00	3.75	2.75	83.75	76.25	52.15	1.25
2	UFV-1	677.22	33.00	29.00	3.50	3.50	91.25	80.00	29.18	1.00
15	COBE	655.96	24.00	12.50	3.50	3.00	97.50	86.25	27.78	1.25
13	WILLIAMS	544.69	22.00	8.00	3.50	3.50	95.00	90.00	38.20	1.75
14	RANSOM	535.11	23.00	8.00	3.25	3.50	92.50	98.75	26.25	1.25
16	GASOY 17	529.19	22.00	8.00	3.25	3.25	91.25	93.75	28.75	1.00
8	CARIBE	324.23	37.75	42.00	3.25	2.75	93.75	92.50	68.53	1.25
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		770.20	31.41	20.08	3.41	3.25	94.77	89.25	46.71	1.39
COEFFICIENT OF VARIATION		119.73	.30	1.66	.28	.31	4.07	2.60	2.29	.27
5% LSD VARIETY MEANS (*****=NS)		31.09%	1.89%	16.55%	16.19%	18.98%	8.60%	5.82%	9.79%	39.50%
		341.04	.85	4.73	*****	*****	*****	7.39	6.51	*****
C O R R E L A T I O N S										
(+ - PRDE=.05 ++ - PRDE=.01)										
YIELD	KG/HA	1.00	.15	-.08	.16	.13	.19	-.12	.25	.12
DAYS TO FLOWER	1.00	.15	.81++	.08	.28	-.35++	-.15	-.55++	.71++	.01
DAYS TO MATURITY	.08	.81++	1.00	.18	.18	-.29+	-.21	-.48++	.51++	-.22
NODULE ABUND 1	.16	.08	.18	1.00	.27+	.27+	-.13	-.09	.08	-.01
NODULE ABUND 2	.13	.13	-.29+	.27+	1.00	1.00	.19	.33++	-.14	.03
NODULE ACT. 1	.19	.19	-.21	-.13	.09	.33++	1.00	.19	.08	.17
NODULE ACT. 2	-.12	-.55++	-.48++	-.09	.08	.14	.19	1.00	-.20	.00
PLANT	.25	.71++	.51++	.08	-.14	.03	.08	-.20	1.00	.31+
LOGGING	.12	.01	-.22	.24	.20	.11	.17	.00	.31+	1.00
SHATTER	-.05	.35++	.35++	.24	.20	.11	-.28+	-.26+	.15	.00
PLANTS PER	.10	-.41++	-.41++	-.56++	-.18	.15	.09	.28+	-.24	.12
FODS PER	.28+	.69++	.74++	.74++	.04	-.28+	-.14	.41++	.48++	-.12
100 SEED	.23	.51++	.15	.15	-.02	-.06	.18	-.09	.74++	.30+
QUALITY OF SEED	-.04	-.04	.05	.05	.14	.08	-.14	-.22	-.20	.29+
PERCENT	-.31+	-.45++	-.34++	-.34++	-.12	.04	-.09	-.08	-.54++	.03
GERM.	-.08	.02	.06	.06	-.19	-.07	.05	.01	.01	.03

TABLE 63

EXPERIMENT 23

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
11	RILLITO	1.00	118.00	31.75	7.90	22.93	2.00	100.00
6	IAC-2	1.00	137.50	30.00	13.68	20.80	2.50	100.00
3	SJ-2	1.00	137.50	33.75	14.08	17.40	1.75	95.00
9	JUPITER	1.00	86.25	40.50	17.40	25.40	2.00	100.00
10	IMPROVED PELICAN	1.00	149.50	30.00	13.78	20.15	2.00	92.50
12	BOSSIER	1.50	144.25	19.50	13.90	19.45	2.00	97.50
7	TUNIA	1.00	34.00	37.75	9.28	24.88	1.25	92.50
5	ORBA	1.00	196.00	25.50	15.63	17.03	2.50	100.00
1	CH-3	1.00	133.00	28.75	14.98	17.60	2.00	97.50
4	HARDEE LS	1.75	65.75	33.75	9.65	20.43	2.25	100.00
2	UFV-1	1.00	135.50	27.50	7.40	20.73	2.50	97.50
15	COBB	1.00	137.75	23.25	8.73	19.98	3.25	100.00
13	WILLIAMS	1.00	166.25	14.00	9.75	21.90	3.25	100.00
14	RANSOM	1.00	178.75	14.50	8.73	22.53	3.50	95.00
16	GASDY 17	1.00	170.75	18.35	9.30	18.85	3.00	100.00
8	CARIE	1.00	102.75	41.25	12.45	16.98	2.00	97.50
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN		1.08	130.84	29.51	11.66	20.44	2.36	97.81
COEFFICIENT OF VARIATION		18.04%	25.40%	3.67	.80	.60	.25	2.39
5% LSD VARIETY MEANS (*****=NS)		.28	47.33	10.46	13.78%	5.83%	21.15%	4.89%
C O R R E L A T I O N S								
				(+ - PROB=.05		++ - PROB=.01)		
YIELD	KG/HA	-.05	-.08	.10	.28+	.23	-.31+	-.08
DAYS TO	FLOWER	.35++	-.41++	.69++	.51++	-.04	-.45++	.02
DAYS TO	MATURITY	.24	-.56++	.74++	.15	.05	-.34++	.06
NODULE	ABUND 1	.20	-.18	.04	-.02	.14	-.12	-.19
NODULE	ABUND 2	-.11	.15	-.28+	-.06	.08	.04	-.07
NODULE	ACT. 1	-.28+	.09	-.14	.18	-.14	-.09	.05
NODULE	ACT. 2	-.26+	.28+	-.41++	-.09	-.22	.03	-.08
PLANT	HEIGHT	.15	-.24	.48++	.74++	-.20	-.54++	.01
LODGING		.00	.12	-.12	.30+	-.29+	-.21	-.03
SHATTER		1.00	-.22	.23	.02	-.05	-.14	.13
HARVEST		-.22	1.00	-.69++	.08	-.37++	.49++	.16
PLANTS	PER PLANT	.23	-.69++	1.00	.09	.13	-.42++	.01
PODS PER	POD HEIGHT	.02	.08	.09	1.00	-.25+	-.27+	-.09
100 SEED	WEIGHT	-.05	-.37++	.13	-.25+	1.00	.03	-.04
QUALITY	OF SEED	-.14	.49++	-.42++	-.27+	.03	1.00	.09
PERCENT	GERM.	.13	.16	.01	-.09	-.04	.09	1.00

TABLE 64 EXPERIMENT 79 YEAR 1978

REGION - AFRICA
 SITE - CHITIPA
 LATITUDE - 9 DEG. 46 MIN. S
 COOPERATOR - P.K. SIBALE
 DATE PLANTED - JANUARY 19, 1979
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9
 AMOUNT OF MOISTURE - 801 MM
 NUMBER OF IRRIGATIONS - 2

COUNTRY - MALAWI
 ELEVATION - 1266 M
 LONGITUDE - 33 DEG. 22 MIN. E
 DATE HARVESTED - MAY, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
15	DAVIS	3782.01	45.00	104.00	3.75	1.75	77.50	38.75	37.00	1.00
11	BOSSIER	3771.59	45.00	101.00	3.75	2.25	72.50	23.75	53.75	1.75
5	ORBA	3406.93	48.00	101.00	3.50	2.25	73.75	32.50	70.25	2.75
7	TUNIA	3313.16	45.00	113.00	4.00	2.00	61.25	51.25	53.75	1.25
4	HARDEE LS	3279.15	59.00	122.00	4.00	2.50	68.75	37.50	61.75	1.25
1	CH-3	3219.39	47.00	109.00	4.00	2.25	66.25	37.50	85.00	2.50
10	IMPROVED PELICAN	3198.56	49.00	104.00	4.00	2.75	56.25	42.50	65.00	1.25
6	IAC-2	3115.21	47.00	109.00	4.00	2.00	67.50	58.75	60.00	1.00
14	COBB	3115.21	38.00	92.00	4.00	2.50	72.50	46.25	36.75	1.00
12	WILLIAMS	3063.11	34.00	88.00	3.25	2.50	88.75	77.50	39.75	1.00
13	RANSOM	3063.11	34.00	92.00	3.00	1.75	83.75	73.75	29.00	1.00
8	CARIBE	3042.27	45.25	109.00	3.75	3.00	71.25	33.75	65.50	2.25
9	JUPITER	2869.34	47.00	122.00	4.25	2.75	23.75	85.00	69.00	2.00
3	SJ-2	2719.29	49.00	109.00	4.00	2.00	82.50	52.50	66.25	2.00
16	GASOY 17	2531.76	36.00	92.00	3.75	2.00	61.25	58.75	26.50	1.00
2	UFV-1	2292.12	47.00	113.00	4.00	2.25	57.50	46.25	26.50	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
(+ - PROB=.05 ++ - PROB=.01) C O R R E L A T I O N S										

YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
1.00	.12	.12	-.16	-.12	.03	-.23	.31+	.16
.12	1.00	.84++	.46++	.14	-.23	-.38++	.61++	.32++
-.02	.84++	1.00	.52++	.14	-.45++	-.10	.52++	.26+
-.16	.46++	.52++	1.00	.02	-.32++	-.09	.25+	.11
-.12	.14	.14	.02	1.00	-.21	-.09	.16	.19
.03	-.23	-.45++	-.32++	-.21	1.00	-.22	-.20	-.15
-.23	-.38++	-.10	-.09	-.09	-.22	1.00	-.19	-.27+
.31+	.61++	.52++	.25+	.16	-.20	-.19	1.00	.69++
.16	.26+	.26+	.11	.19	-.15	-.27+	.69++	1.00
.03	.09	.07	-.13	.06	.16	-.12	.16	.27+
.45++	-.27+	-.40++	-.21	-.07	.14	-.24	.04	.04
.10	.69++	.69++	.36++	.15	-.22	-.24	.32++	.26+
.25+	.53++	.47++	.17	.23	-.19	-.21	.71++	.46++
-.07	-.74++	-.52++	-.30+	-.23	-.00	.36++	-.78++	-.56++
-.12	-.19	.21	.00	-.10	-.38++	.47++	-.18	-.13
-.02	-.23	-.21	-.00	.01	.01	-.03	-.07	.07

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
15	DAVIS	1.00	215.25	23.00	9.25	22.50	2.25	98.50	44.3	19.9
11	BOSSIER	1.00	203.50	25.50	15.00	21.25	2.00	99.25	45.0	18.3
5	ORBA	1.50	187.50	31.00	17.75	15.00	1.50	97.75	40.7	16.8
7	TUNIA	1.00	193.00	23.50	16.75	23.75	2.50	99.25	41.7	19.8
4	HARDEE LS	1.00	169.25	48.25	14.50	15.00	2.00	81.50	40.9	20.0
10	CH-3	1.00	219.50	34.00	16.00	15.00	2.00	98.00	42.8	19.7
1	IMPROVED PELICAN	1.00	233.25	32.25	14.25	16.25	1.00	99.00	44.9	19.4
6	IAC-2	1.00	215.00	29.75	12.50	20.00	2.75	96.25	42.4	20.1
14	COBB	1.00	219.25	20.25	7.75	25.00	1.50	98.50	43.3	20.6
12	WILLIAMS	1.00	206.75	20.00	7.50	26.25	1.75	97.50	43.1	20.7
13	RANSOM	1.00	202.25	20.50	6.25	25.00	3.00	96.50	44.5	20.3
8	CARIBE	1.00	196.25	36.25	11.50	16.25	2.00	94.00	44.4	19.0
9	JUPITER	1.00	176.50	36.50	16.25	20.00	4.00	95.00	42.8	19.0
3	SJ-2	1.00	189.50	36.25	14.00	15.00	1.25	98.75	44.4	18.2
16	GASOY 17	1.00	226.75	17.25	7.00	25.00	3.00	95.75	44.4	17.6
2	UFV-1	1.00	60.00	51.00	6.50	23.75	2.25	98.50	45.7	18.6
GRAND MEAN										
1.03										
STANDARD ERROR OF A VARIETY MEAN										
.07										
COEFFICIENT OF VARIATION										
14.00%										
5% LSD VARIETY MEANS (*****=NS)										
.21										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	.03	.45++	-.10	.25+	-.07	-.12	-.02		
DAYS TO	FLOWER	.09	-.27+	.69++	.53++	-.74++	-.19	-.23		
DAYS TO	MATURITY	-.07	-.40++	.69++	.47++	-.52++	.21	-.21		
NODULE	ABUND 1	-.13	-.21	.36++	.17	-.30+	.00	-.00		
NODULE	ABUND 2	.06	-.07	.15	.23	-.23	-.10	.01		
NODULE	ACT. 1	.16	.14	-.22	-.19	-.00	-.38++	.01		
NODULE	ACT. 2	-.12	.00	-.24	-.21	.36++	.47++	-.03		
PLANT	HEIGHT	.16	.24	.32++	.71++	-.78++	-.18	-.07		
LODGING		.27+	.04	.26+	.46++	-.56++	-.13	.07		
SHATTER		1.00	-.04	.01	.20	-.22	-.15	.07		
PLANTS	HARVEST	-.04	1.00	-.64++	.13	-.02	-.11	.03		
PODS PER	PLANT	.01	-.64++	1.00	.08	-.45++	-.06	-.08		
POD	HEIGHT	.20	.13	.08	1.00	-.59++	-.11	-.03		
100 SEED	WEIGHT	-.22	-.02	-.45++	-.59++	1.00	.34++	.14		
QUALITY	OF SEED	-.15	-.11	-.06	-.11	.34++	1.00	-.08		
PERCENT	GERM.	.07	.03	-.08	-.03	.14	-.08	1.00		

TABLE 65 EXPERIMENT 152

YEAR 1978

REGION - AFRICA
 SITE - CHITALA
 LATITUDE - 13 DEG. 30 MIN. S
 COOPERATOR - P.K. SIBALE
 DATE PLANTED - NOVEMBER 24, 1978
 SOIL TYPE - SILT 10%, CLAY 26%, PH 6.2
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 403 MM
 SUBSTITUTE VARIETY - HARDEE

COUNTRY - MALAWI
 ELEVATION - 600 M
 LONGITUDE - 34 DEG. 15 MIN. E
 DATE HARVESTED - MARCH, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
9	DAVIS	3186.05	.00	112.00	3.25	3.25	.00	92.50	59.75	1.25
15	BRAGG	2202.52	.00	112.00	3.75	2.75	.00	90.00	56.25	1.00
13	CUTLER 71	2162.10	.00	90.00	3.00	3.00	.00	98.75	54.13	3.25
16	CRAWFORD	2131.68	.00	90.00	3.50	3.25	.00	97.50	58.38	1.50
6	HARDEE	2094.17	.00	112.00	3.50	2.75	.00	96.25	88.50	2.75
11	CALLAND	2033.74	.00	90.00	3.00	3.25	.00	98.75	57.63	1.75
5	RANSOM	2014.99	.00	112.00	3.75	3.25	.00	98.75	50.50	1.00
7	JAMES	1921.22	.00	99.00	3.50	2.75	.00	92.50	58.25	1.00
12	FRANKLIN	1789.94	.00	90.00	3.75	3.25	.00	92.50	50.13	1.75
2	KILLITO	1781.61	.00	99.00	4.00	3.50	.00	95.00	57.88	1.00
4	WILLIAMS	1733.68	.00	90.00	3.75	3.25	.00	98.75	50.75	1.50
14	MITCHELL	1639.91	.00	90.00	3.25	3.25	.00	100.00	54.75	1.75
10	GASOY 17	1519.05	.00	112.00	3.75	3.00	.00	100.00	46.50	1.00
8	FORREST	1166.90	.00	112.00	4.00	4.00	.00	87.50	55.75	1.00
3	BOSSIER	1052.29	.00	135.00	4.25	3.75	.00	92.50	68.25	2.50
1	IMPROVED PELICAN	954.36	.00	135.00	4.25	4.00	.00	96.25	101.50	3.75
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.00	.32+	.27+	-.08	.00	-.04	-.19	-.07
DAYS TO FLOWER	1.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
DAYS TO MATURITY	-.32+	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 1	-.27+	.00	.00	.41++	.41++	.18	.00	-.15	.58++	.24
NODULE ABUND 2	-.08	.00	.00	.18	.58++	1.00	.00	-.34++	.15	-.03
NODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00	-.30+	.13	.12
NODULE ACT. 2	-.04	.00	.00	.15	.34++	-.30+	.00	1.00	.00	.00
PLANT	-.19	.00	.00	.58++	.03	.12	.00	.01	.01	.24
LOGGING	-.07	.00	.00	.24	.03	.00	.00	.24	1.00	.59++
SHATTER	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
HARVEST	.30+	.00	.00	.00	.00	.00	.00	.00	.00	.00
PODS PER PLANT	-.04	.00	.00	.07	-.01	-.04	.00	-.13	-.08	-.08
POD	.00	.00	.00	.07	.09	.13	.00	.07	.31+	.13
100 SEED WEIGHT	.02	.00	.00	-.25+	-.10	-.02	.00	.10	.34++	.51++
QUALITY OF SEED	-.41++	.00	.00	-.31+	-.25+	-.19	.00	.07	-.16	-.11
PERCENT GERM.	.18	.00	.00	.46++	.27+	-.05	.00	.17	.14	-.23+
		.00	.00	.22	-.08	-.10	.00	.04	.29+	.20

TABLE 65 EXPERIMENT 152 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
9	DAVIS	.00	214.75	31.70	5.55	24.18	4.25	67.75	43.4	22.1
15	BRAGO	.00	214.00	18.45	5.85	23.30	5.00	50.75	44.1	22.9
13	CUTLER 71	.00	181.00	29.48	11.40	21.70	3.75	52.75	44.1	23.9
16	CRAWFORD	.00	146.75	33.55	8.30	23.28	4.00	56.50	44.3	23.0
6	HARDEE	.00	200.50	28.10	12.80	27.88	5.00	66.00	43.9	22.0
11	CALLAND	.00	204.00	27.40	10.70	25.93	4.50	36.50	45.1	21.6
5	RANSOM	.00	194.25	17.75	7.15	24.38	5.00	20.00	44.2	24.9
7	JAMES	.00	204.75	37.80	8.73	24.30	5.00	37.50	45.1	24.3
12	FRANKLIN	.00	185.75	24.40	10.60	23.05	4.00	42.00	41.4	22.7
2	RILLITO	.00	133.50	54.80	8.65	20.50	5.00	32.75	44.8	24.6
4	WILLIAMS	.00	197.50	23.18	8.70	24.88	4.50	37.50	43.6	22.5
14	MITCHELL	.00	164.50	28.50	8.70	24.48	4.50	50.50	43.1	23.8
10	GASOY 17	.00	202.25	28.35	5.00	23.10	5.00	48.50	43.8	22.0
8	FORREST	.00	162.50	32.28	6.65	19.50	5.00	53.50	42.7	23.3
3	BOSSIER	.00	177.75	27.20	7.75	23.08	5.00	53.25	45.7	22.1
1	IMPROVED PELICAN	.00	170.25	44.88	9.70	16.95	4.75	54.75	44.4	21.9
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ -- PROB=.05 ++ -- PROB=.01)										
YIELD	KG/HA	.00	.30†	.04	.02	.50††	.41†	.13		
DAYS TO	FLOWER	.00	.00	.00	.00	.00	.00	.00		
DAYS TO	MATURITY	.00	.07	.07	.25†	.31†	.42††	.22		
NODULE	ABUND 1	.00	-.01	.09	.10	-.25†	.27†	.08		
NODULE	ABUND 2	.00	-.04	.13	-.02	.19	-.05	.10		
NODULE	ACT. 1	.00	.00	.00	.00	.00	.00	.00		
NODULE	ACT. 2	.00	.13	.07	.10	.07	.17	.04		
PLANT	HEIGHT	.00	-.08	.31†	.34††	.18	.14	.29†		
	LOGGING	.00	-.08	.13	.51††	.11	.28†	.20		
	SHATTER	1.00	.00	.00	.00	.00	.00	.00		
PLANTS	HARVEST	.00	1.00	-.39††	.08	.33††	.07	.10		
PODS PER	PLANT	.00	-.39††	1.00	.16	.36††	.01	.19		
POD	HEIGHT	.00	-.08	.16	1.00	.29	-.30†	.10		
100 SEED	WEIGHT	.00	.33††	-.36††	.20	1.00	.00	.07		
QUALITY	OF SEED	.00	.07	.01	-.30†	.00	1.00	.14		
PERCENT	GERM.	.00	.10	.19	.10	.07	.14	1.00		

TABLE 66 EXPERIMENT 163 YEAR 1978

REGION - AFRICA COUNTRY - MALAWI
 SITE - LILONGWE ELEVATION - 3725 M
 LATITUDE - 13 DEG. 59 MIN. S LONGITUDE - 33 DEG. 38 MIN. E
 COOPERATOR - P.K. SIBALE
 DATE PLANTED - DECEMBER 12, 1978 DATE HARVESTED - MARCH, 1979
 SOIL TYPE - SILT 14%, CLAY 42%, PH 6.0
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 462 MM
 SUBSTITUTE VARIETY - HARDEE

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEULE ABUND 1	NODEULE ABUND 2	NODEULE ACT. 1	NODEULE ACT. 2	PLANT HEIGHT	LOGGING
9	DAVIS	4709.27	44.00	111.00	4.00	2.50	100.00	97.50	68.50	1.00
8	FORREST	4584.25	36.00	111.00	3.25	3.75	98.75	93.75	61.25	1.00
3	BOSSIER	4250.85	44.00	115.00	3.75	2.00	100.00	98.75	81.00	2.00
15	BRAEG	3898.70	34.00	106.00	4.00	3.25	98.75	100.00	41.25	1.00
2	RILLITO	3887.01	34.00	97.00	3.75	2.00	100.00	95.00	53.50	2.50
6	HARDEE	3627.81	44.00	111.00	3.25	2.00	100.00	100.00	83.25	2.50
5	RANSOM	3611.14	31.00	106.00	3.50	2.75	100.00	98.75	40.00	1.00
10	GASOY 17	3609.05	31.00	97.00	3.75	3.50	100.00	96.25	35.50	1.00
14	MITCHELL	3473.61	31.00	97.00	3.75	3.25	100.00	93.75	45.00	1.25
16	CRAWFORD	3406.93	31.00	97.00	3.50	3.25	98.75	92.50	50.00	1.00
7	JAMES	3371.51	31.00	97.00	3.00	2.50	100.00	95.00	46.50	1.00
13	CUTLER 71	3177.72	31.00	97.00	3.25	3.00	97.50	98.75	44.25	1.00
1	IMPROVED PELICAN	2848.49	49.00	115.00	3.75	2.00	100.00	93.75	88.25	3.25
12	FRANKLIN	2765.14	31.00	89.00	3.25	4.00	97.50	95.00	41.00	1.00
11	CALLAND	2688.04	31.00	87.00	3.25	3.75	98.75	96.25	39.75	1.00
4	WILLIAMS	2583.85	31.00	89.00	3.25	3.00	98.75	85.00	34.38	1.00
GRAND MEAN		3525.84	35.25	102.00	3.52	2.91	99.30	95.63	53.46	1.41
STANDARD ERROR OF A VARIETY MEAN		171.89	.00	.00	.22	.29	1.02	2.54	2.78	.28
COEFFICIENT OF VARIATION		9.75%	.00%	.00%	12.24%	19.82%	2.05%	5.32%	10.41%	40.28%
5% LSD VARIETY MEANS (*****=NS)		489.63	.00	.00	.61	.82	*****	7.25	7.93	.81

CORRELATIONS (+ - PROB=.05 +- - PROB=.01)

YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
.31+	.31+	.31+	.31+	.31+	.31+	.31+	.31+	.31+	.31+	.31+
.84++	.84++	.84++	.84++	.84++	.84++	.84++	.84++	.84++	.84++	.84++
.55++	.55++	.55++	.55++	.55++	.55++	.55++	.55++	.55++	.55++	.55++
.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20
.23	.23	.23	.23	.23	.23	.23	.23	.23	.23	.23
-.53++	-.53++	-.53++	-.53++	-.53++	-.53++	-.53++	-.53++	-.53++	-.53++	-.53++
.12	.12	.12	.12	.12	.12	.12	.12	.12	.12	.12
.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20
.32+	.32+	.32+	.32+	.32+	.32+	.32+	.32+	.32+	.32+	.32+
.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06
-.45++	-.45++	-.45++	-.45++	-.45++	-.45++	-.45++	-.45++	-.45++	-.45++	-.45++
.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15
.17	.17	.17	.17	.17	.17	.17	.17	.17	.17	.17
.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14
.59++	.59++	.59++	.59++	.59++	.59++	.59++	.59++	.59++	.59++	.59++
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
.59++	.59++	.59++	.59++	.59++	.59++	.59++	.59++	.59++	.59++	.59++
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06
.12	.12	.12	.12	.12	.12	.12	.12	.12	.12	.12
.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
.57++	.57++	.57++	.57++	.57++	.57++	.57++	.57++	.57++	.57++	.57++
.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
.55++	.55++	.55++	.55++	.55++	.55++	.55++	.55++	.55++	.55++	.55++
.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.11
-.28+	-.28+	-.28+	-.28+	-.28+	-.28+	-.28+	-.28+	-.28+	-.28+	-.28+
-.12	-.12	-.12	-.12	-.12	-.12	-.12	-.12	-.12	-.12	-.12
-.27+	-.27+	-.27+	-.27+	-.27+	-.27+	-.27+	-.27+	-.27+	-.27+	-.27+
.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
9	DAVIS	.00	288.75	25.88	8.85	23.53	2.75	91.00	44.2	20.6
8	FORREST	.00	266.75	23.75	8.95	19.90	3.00	90.25	42.0	21.1
3	BOSSIER	.00	231.50	28.80	10.00	22.35	2.75	91.00	44.4	20.5
15	BRAGG	.00	291.50	20.45	9.10	24.30	3.75	75.75	43.7	20.8
2	RILLITO	.00	245.50	26.88	8.55	22.43	4.00	93.25	42.8	22.0
6	HARDEE	.00	263.00	23.00	11.45	21.70	2.50	91.25	42.5	20.3
5	RANSOM	.00	257.75	20.50	6.10	22.68	3.75	80.00	42.2	23.3
10	GASOY 17	.00	287.50	22.30	8.50	21.08	3.50	77.75	41.5	19.9
14	MITCHELL	.00	269.25	23.15	7.65	21.90	3.25	95.75	40.3	23.3
16	CRAWFORD	.00	270.00	23.78	8.55	22.18	3.00	91.75	43.1	21.7
7	JAMES	.00	297.50	20.05	9.10	23.43	3.00	95.50	43.6	22.4
13	CUTLER 71	.00	280.25	21.80	9.30	22.45	4.00	87.75	43.4	21.1
1	IMPROVED PELICAN	.00	277.25	35.10	13.15	19.00	3.00	82.75	45.3	20.0
12	FRANKLIN	.00	284.00	20.35	7.80	20.98	4.75	97.50	41.0	20.3
11	CALLAND	.00	275.50	20.20	9.40	23.88	4.25	85.00	43.5	19.7
4	WILLIAMS	.00	292.00	16.68	8.25	21.93	4.00	94.75	42.6	22.5
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT HEIGHT										
LODGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 67 EXPERIMENT 212 YEAR 1978

REGION - AFRICA
 SITE - BERNKANE
 LATITUDE - 34 DEG. 56 MIN. N
 COOPERATOR - M.A. YACOURI
 DATE PLANTED - MAY 13, 1978
 SOIL TYPE - SAND 23%, SILT 40%, CLAY 37%, PH 8.2
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 834 MM
 NUMBER OF IRRIGATIONS - 12 (801 MM)

COUNTRY - MOROCCO
 ELEVATION - 145 M
 LONGITUDE - 2 DEG. 30 MIN. W

DATE HARVESTED - AUGUST, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
9	HARCOR	3724.49	43.00	115.25	.00	2.75	.00	41.25	77.25	1.00
1	WILLIAMS	3459.02	43.00	121.00	.00	2.25	.00	96.25	77.75	1.00
13	UNION	3313.16	43.00	121.00	.00	2.75	.00	93.75	92.75	1.00
2	CALLAND	3240.23	43.00	118.50	.00	3.00	.00	91.25	85.25	1.00
15	EVANS	3219.81	43.00	128.00	.00	2.50	.00	92.50	98.50	1.75
4	CUTLER 71	3104.79	43.00	125.50	.00	3.00	.00	80.00	88.25	1.50
14	CORSOY	3003.52	43.00	106.75	.00	3.25	.00	21.25	69.25	1.00
3	FRANKLIN	2885.99	43.00	123.25	.00	2.50	.00	75.00	103.00	1.75
8	STEELE	2844.32	43.00	101.25	.00	3.25	.00	41.25	69.00	1.00
16	CRAWFORD	2823.48	43.00	105.25	.00	3.25	.00	8.75	55.50	1.00
10	HODGSON	2821.40	43.00	103.50	.00	4.25	.00	35.00	60.50	1.00
11	ELF	2810.98	43.00	126.25	.00	3.50	.00	83.75	45.75	1.25
5	MITCHELL	2771.39	43.00	123.75	.00	3.25	.00	100.00	85.00	1.25
12	COLUMBUS	2594.27	43.00	127.25	.00	2.75	.00	98.75	92.00	1.25
7	SWIFT	2067.91	43.00	104.50	.00	4.00	.00	6.25	62.50	1.00
6	ALTONA	1854.54	43.00	82.50	.00	5.00	.00	.00	61.75	1.00
	GRAND MEAN	2908.71	43.00	114.72	.00	3.20	.00	60.31	76.50	1.17
	STANDARD ERROR OF A VARIETY MEAN	489.24	.00	4.97	.00	.44	.00	7.85	8.00	.22
	COEFFICIENT OF VARIATION	33.64%	.00%	8.67%	.00%	27.17%	.00%	26.02%	20.92%	37.53%
	5% LSD VARIETY MEANS (*****=NS)	*****	.00	14.17	.00	1.24	.00	22.35	22.79	*****

CORRELATIONS

(+ -- PROB=.05 ++ -- PROB=.01)

YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
1.00	.00	.39++	.00	-.48++	.03	.27+	.52++	.30+
.00	1.00	.00	.00	.00	.00	.00	.00	.00
.39++	.00	1.00	.00	-.47++	.00	.67++	.46++	.39++
.00	.00	.00	1.00	.00	.00	.00	.00	.00
-.48++	.00	-.47++	.00	1.00	.00	-.47++	-.28+	-.28+
.00	.00	.00	.00	.00	1.00	.00	.00	.00
.27+	.00	.69++	.00	-.47++	.00	1.00	.48++	.24
.52++	.00	.46++	.00	-.45++	.00	.24	.46++	.46++
.30+	.00	.39++	.00	-.28+	.00	.02	.14	.08
-.04	.00	.16	.00	-.04	.00	.02	-.10	.22
-.02	.00	-.00	.00	.03	.00	.05	.33++	.26+
.64++	.00	.24	.00	-.41++	.00	.57++	.32++	.14
-.06	.00	.48++	.00	-.07	.00	.36++	.34++	.09
.63++	.00	.30+	.00	-.35++	.00	-.06	-.21	.04
-.61++	.00	-.07	.00	.16	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00

(CONTINUED)

YEAR 1978

EXPERIMENT 21.2

TABLE 67

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
9	HARCOR	1.00	165.00	51.25	5.28	17.25	2.00	.00	41.3	22.9
1	WILLIAMS	1.00	188.00	34.75	7.35	22.28	1.50	.00	43.5	22.2
13	UNION	1.00	163.75	38.25	9.93	22.05	1.25	.00	43.9	21.7
2	CALLAND	1.00	149.25	31.50	9.53	20.70	1.50	.00	41.1	22.4
15	EVANS	1.00	116.50	45.50	8.23	16.85	2.25	.00	41.3	22.9
4	CUTLER 71	1.00	160.50	40.75	11.30	20.58	1.50	.00	43.1	21.7
14	CORSOY	1.00	171.00	50.50	6.58	15.70	1.75	.00	41.4	21.6
3	FRANKLIN	1.25	153.75	36.25	12.58	17.63	2.25	.00	40.8	22.0
16	STEELE	1.00	163.75	34.50	6.90	16.85	2.00	.00	42.2	21.7
16	CRAWFORD	1.00	174.75	35.25	4.60	17.55	1.75	.00	43.9	21.8
10	HODGSON	1.00	159.25	36.00	9.05	17.00	2.00	.00	41.0	23.6
11	ELF	1.00	159.25	33.00	9.00	18.43	1.75	.00	42.4	22.7
5	MITCHELL	1.00	165.50	32.25	12.70	16.73	2.50	.00	40.4	23.0
12	COLUMBUS	1.25	164.50	43.50	11.68	14.55	2.75	.00	45.0	19.5
7	SWIFT	1.25	139.00	32.00	5.30	16.75	2.00	.00	40.9	22.6
6	ALTONA	1.00	143.25	30.00	5.10	16.20	1.75	.00	43.9	19.5
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
YIELD										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE AROUND 1										
NODULE AROUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
NODULE HEIGHT										
PLANT										
LOGGING										
SHATTER										
HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										
++ -- PROB=+.01										
+.64++										
+.63++										
+.48++										
+.36++										
+.32++										
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TABLE 68

EXPERIMENT 211

YEAR 1978

REGION - AFRICA
 SITE - GHARB
 LATITUDE - 34 DEG. 30 MIN. N
 COOPERATOR - M.A. YACOUBI
 DATE PLANTED - MAY 22, 1978
 SOIL TYPE - SAND 17%, SILT 55%, CLAY 22%, PH 8.2
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 707 MM
 NUMBER OF IRRIGATIONS - 9 (600 MM)

COUNTRY - MOROCCO
 ELEVATION - 85 M
 LONGITUDE - 8 DEG. 3 MIN. W

DATE HARVESTED - AUGUST, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEULE ABUND 1	NODEULE ABUND 2	NODEULE ACT. 1	NODEULE ACT. 2	PLANT HEIGHT	LODGING
11	ELF	3046.44	51.00	126.25	.00	3.50	.00	85.00	60.10	.00
4	CUTLER 71	2750.55	49.50	113.00	.00	3.00	.00	93.75	80.25	.00
5	MITCHELL	2729.71	49.50	116.50	.00	3.50	.00	75.00	81.68	.00
9	HARCOR	2613.02	42.00	87.50	.00	4.00	.00	56.25	79.33	.00
15	EVANS	2592.18	50.25	115.75	.00	3.50	.00	80.00	79.35	.00
14	CORSOY	2535.92	39.00	87.00	.00	3.75	.00	66.25	68.15	.00
12	COLUMBUS	2521.34	51.00	127.00	.00	3.75	.00	70.00	73.83	.00
3	FRANKLIN	2342.13	51.00	129.00	.00	3.50	.00	68.75	76.93	.00
16	CRAWFORD	2158.76	34.00	78.25	.00	3.50	.00	77.50	56.23	.00
10	HODGSON	2083.75	42.00	87.00	.00	4.00	.00	65.00	66.37	.00
2	CALLAND	2083.75	51.00	115.00	.00	3.75	.00	75.00	82.85	.00
13	UNION	2075.41	51.00	115.00	.00	3.50	.00	58.75	79.78	.00
1	WILLIAMS	1967.06	47.25	108.00	.00	3.50	.00	70.00	71.95	.00
8	STEELE	1954.56	39.00	87.00	.00	3.75	.00	61.25	72.50	.00
7	SWIFT	1369.02	39.00	87.00	.00	4.25	.00	36.25	67.30	.00
6	ALTONA	839.75	39.00	87.00	.00	4.25	.00	47.50	50.93	.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		2228.96	45.34	104.14	.00	3.69	.00	67.89	71.72	.00
COEFFICIENT OF VARIATION		224.22	1.41	1.82	.00	.28	.00	12.55	4.22	.00
5% LSD VARIETY MEANS (*****=NS)		20.12%	6.23%	3.50%	.00%	15.19%	.00%	36.97%	11.77%	.00%
		638.67	4.03	5.19	.00	*****	.00	*****	12.02	.00

CORRELATIONS

(+ - PROB=.05 ++ - PROB=.01)

YIELD	KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEULE ABUND 1	NODEULE ABUND 2	NODEULE ACT. 1	NODEULE ACT. 2	PLANT HEIGHT	LODGING
1.00	.35++	.40++	.89++	.00	.30+	.00	.31+	.44++	.00
.35++	1.00	.89++	1.00	.00	.29+	.00	.25+	.46++	.00
.40++	.89++	1.00	1.00	.00	.25+	.00	.22	.35++	.00
.00	.00	.25+	.00	1.00	.00	.00	.00	.00	.00
-.30+	-.29+	.00	.00	.00	1.00	.00	-.77++	-.15	.00
.00	.00	.00	.00	.00	.00	1.00	1.00	.00	.00
.31+	.25+	.22	.35++	.00	-.77++	.00	1.00	.18	.00
.44++	.00	.00	.00	.00	.15	.00	.00	1.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	1.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
-.10	-.48++	-.50++	-.43++	.00	-.06	.00	.02	-.32++	.00
.07	-.36++	-.43++	.00	.00	.34++	.00	-.25+	-.06	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

(Continued)

YEAR 1978

EXPERIMENT 211

TABLE 68

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
11	ELF	.00	235.00	22.45	.00	.00	.00	.00	41.8	23.7
4	CUTLER 71	.00	264.25	14.10	.00	.00	.00	.00	41.9	22.7
5	MITCHELL	.00	216.00	19.70	.00	.00	.00	.00	40.0	22.9
9	HARCOR	.00	260.25	29.70	.00	.00	.00	.00	46.7	21.7
15	EVANS	.00	175.50	23.55	.00	.00	.00	.00	41.6	20.9
14	CORSOY	.00	264.00	24.55	.00	.00	.00	.00	41.3	21.4
12	COLUMBUS	.00	230.00	13.35	.00	.00	.00	.00	43.9	21.6
3	FRANKLIN	.00	231.75	15.95	.00	.00	.00	.00	40.8	23.2
16	CRAWFORD	.00	322.50	24.88	.00	.00	.00	.00	44.4	20.9
10	HODGSON	.00	267.75	21.95	.00	.00	.00	.00	41.8	22.2
2	CALLAND	.00	245.75	18.58	.00	.00	.00	.00	41.1	22.0
13	UNION	.00	243.75	13.28	.00	.00	.00	.00	42.6	21.9
1	WILLIAMS	.00	231.25	13.50	.00	.00	.00	.00	42.5	22.3
8	STEELE	.00	235.50	21.80	.00	.00	.00	.00	42.3	21.5
7	SWIFT	.00	255.25	23.19	.00	.00	.00	.00	41.1	21.7
6	ALTONA	.00	271.25	22.25	.00	.00	.00	.00	43.1	17.1

CORRELATIONS

++ - FOR. (01)

(+ ... FOR ...)

YIELD	KG/HA
DAYS TO	FLOWER
DAYS TO	MATURITY
NOVULE	ABUND 1
NOVULE	ABUND 2
NOVULE	ACT. 1
NOVULE	ACT. 2
PLANT	HEIGHT
	LOGGING
	SHATTER
PLANTS	HARVEST
PODS PER	PLANT
FOU	HEIGHT
100 SEED	WEIGHT
QUALITY	OF SEED
PERCENT	GERM.

[illegible]

TABLE 69

EXPERIMENT 216

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
16	CRAWFORD	.00	141.25	30.50	.00	15.20	.00	97.50	42.6	21.5
3	FRANKLIN	.00	218.00	22.50	.00	16.38	.00	97.00	40.1	23.3
11	ELF	.00	169.25	26.75	.00	18.08	.00	95.00	43.5	22.8
2	CALLAND	.00	212.50	23.75	.00	14.48	.00	87.00	42.7	22.0
13	UNION	.00	184.75	26.00	.00	16.05	.00	98.50	43.2	22.8
12	COLUMBUS	.00	216.25	23.50	.00	14.18	.00	94.00	42.7	21.1
4	CUTLER 71	.00	207.75	23.25	.00	16.18	.00	98.50	41.7	23.8
15	EVANS	.00	185.75	32.00	.00	11.85	.00	49.50	40.9	22.3
1	WILLIAMS	.00	199.00	21.25	.00	14.18	.00	90.00	43.2	21.3
14	CORSOY	.00	185.25	32.25	.00	13.83	.00	74.00	41.6	23.7
9	HARCOR	.00	155.75	32.25	.00	13.00	.00	65.00	43.1	19.9
10	HODGSON	.00	193.75	26.25	.00	13.15	.00	92.00	42.8	22.0
5	MITCHELL	.00	194.00	29.75	.00	14.23	.00	91.00	40.4	23.7
8	STEELE	.00	171.50	28.00	.00	13.50	.00	95.00	43.6	20.7
6	ALTONA	.00	200.00	20.75	.00	11.80	.00	41.00	42.5	17.6
7	SWIFT	.00	213.50	18.75	.00	11.35	.00	74.00	41.2	22.6
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT HEIGHT										
LODGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

++ - PROB=.01)

(+ - PROB=.05

CORRELATIONS

YIELD

DAYS TO

DAYS TO

NODULE

NODULE

NODULE

PLANT

LODGING

SHATTER

PLANTS

PODS PER

100 SEED

QUALITY

PERCENT

GERM.

YIELD

DAYS TO

DAYS TO

NODULE

NODULE

NODULE

PLANT

LODGING

SHATTER

PLANTS

PODS PER

100 SEED

QUALITY

PERCENT

GERM.

YIELD

DAYS TO

DAYS TO

NODULE

NODULE

NODULE

PLANT

LODGING

SHATTER

PLANTS

PODS PER

100 SEED

QUALITY

PERCENT

GERM.

YIELD

DAYS TO

DAYS TO

NODULE

NODULE

NODULE

PLANT

LODGING

SHATTER

PLANTS

PODS PER

100 SEED

QUALITY

PERCENT

GERM.

YIELD

DAYS TO

DAYS TO

NODULE

NODULE

NODULE

PLANT

LODGING

SHATTER

PLANTS

PODS PER

100 SEED

QUALITY

PERCENT

GERM.

YIELD

DAYS TO

DAYS TO

NODULE

NODULE

NODULE

PLANT

LODGING

SHATTER

PLANTS

PODS PER

100 SEED

QUALITY

PERCENT

GERM.

YIELD

DAYS TO

DAYS TO

NODULE

NODULE

NODULE

PLANT

LODGING

SHATTER

PLANTS

PODS PER

100 SEED

QUALITY

PERCENT

GERM.

YIELD

DAYS TO

DAYS TO

NODULE

NODULE

NODULE

PLANT

LODGING

SHATTER

PLANTS

PODS PER

100 SEED

QUALITY

PERCENT

GERM.

YIELD

DAYS TO

DAYS TO

NODULE

NODULE

NODULE

PLANT

LODGING

SHATTER

PLANTS

PODS PER

100 SEED

QUALITY

PERCENT

GERM.

YIELD

DAYS TO

DAYS TO

NODULE

NODULE

NODULE

PLANT

LODGING

SHATTER

PLANTS

PODS PER

100 SEED

QUALITY

PERCENT

GERM.

YIELD

DAYS TO

DAYS TO

NODULE

NODULE

NODULE

PLANT

LODGING

SHATTER

PLANTS

PODS PER

100 SEED

QUALITY

PERCENT

GERM.

YIELD

DAYS TO

DAYS TO

NODULE

NODULE

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PLANT

LODGING

SHATTER

PLANTS

PODS PER

100 SEED

QUALITY

PERCENT

GERM.

YIELD

DAYS TO

DAYS TO

NODULE

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PLANT

LODGING

SHATTER

PLANTS

PODS PER

100 SEED

QUALITY

PERCENT

GERM.

YIELD

DAYS TO

DAYS TO

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PLANT

LODGING

SHATTER

PLANTS

PODS PER

100 SEED

QUALITY

PERCENT

GERM.

YIELD

DAYS TO

DAYS TO

NODULE

NODULE

NODULE

PLANT

LODGING

SHATTER

PLANTS

PODS PER

100 SEED

QUALITY

PERCENT

GERM.

YIELD

DAYS TO

DAYS TO

NODULE

NODULE

NODULE

PLANT

LODGING

SHATTER

PLANTS

PODS PER

100 SEED

QUALITY

PERCENT

TABLE 70

EXPERIMENT 161

YEAR 1978

REGION - AFRICA
 SITE - KARAMA
 LATITUDE - 2 DEG. 16 MIN. S
 COOPERATOR - NDAMAGE GEORGES
 DATE PLANTED - FEBRUARY 22, 1979
 SOIL TYPE - LAKE COLLUVIONS, PH 6-7
 AMOUNT OF MOISTURE - 594 MM
 LOCAL VARIETY - PALMETTO

COUNTRY - RWANDA
 ELEVATION - 1350 M
 LONGITUDE - 30 DEG. 17 MIN. E
 DATE HARVESTED - JUNE, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
9	DAVIS	3304.83	49.00	116.00	4.00	2.00	96.25	71.25	55.30	.00
8	FORREST	3036.02	49.00	116.00	4.00	2.00	95.00	66.25	56.18	.00
3	BOSSIER	2958.92	60.00	116.00	4.00	2.00	86.25	71.25	72.03	.00
15	BRAGG	2873.49	45.00	105.00	4.00	2.00	96.25	95.00	42.05	.00
7	JAMES	2765.14	45.00	107.00	4.00	2.00	100.00	85.00	50.38	.00
11	CALLAND	2723.46	45.00	103.50	4.00	2.00	97.50	65.00	47.90	.00
16	CRAMFORD	2715.13	45.00	105.00	4.00	2.00	92.50	82.50	51.25	.00
5	RANSOM	2708.87	45.00	107.75	4.00	2.00	96.25	78.75	37.55	.00
13	CUTLER 71	2669.28	45.00	103.50	4.00	2.00	96.25	80.00	50.35	.00
1	IMPROVED PELICAN	2592.18	60.00	116.00	4.00	2.00	97.50	66.25	80.08	.00
2	MITCHELL	2588.02	45.00	102.75	4.00	2.00	100.00	86.25	43.78	.00
14	RILLITO	2508.83	49.00	107.75	4.00	2.00	95.00	86.25	51.70	.00
6	PALMETTO	2469.24	49.00	105.00	4.00	2.00	95.00	58.75	70.65	.00
4	WILLIAMS	2431.74	45.00	102.00	4.00	2.00	96.25	77.50	33.53	.00
12	FRANKLIN	2262.95	45.00	102.00	4.00	2.00	93.75	86.25	45.28	.00
10	GASDY 17	2102.50	45.00	107.75	4.00	2.00	90.00	92.50	31.73	.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
(+ - PROB=.05 ++ - PROB=.01) C O R R E L A T I O N S										
YIELD	KG/HA	1.00	.18	.38++	.00	.00	.15	-.16	.34++	.00
DAYS TO FLOWER		.18	1.00	.68++	.00	.00	-.18	-.37++	.78++	.00
DAYS TO MATURITY		.38++	.68++	1.00	.00	.00	-.16	-.28+	.51++	.00
NODULE ABUND 1		.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE ACT. 1		.15	-.18	-.16	.00	.00	1.00	.03	-.02	.00
NODULE ACT. 2		-.16	-.37++	-.28+	.00	.00	.03	1.00	-.39++	.00
PLANT HEIGHT		.34++	.78++	.51++	.00	.00	-.02	-.39++	1.00	.00
LODGING		.00	.00	.00	.00	.00	.00	.00	.00	.00
SHATTER		.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST		.12	-.15	-.17	.00	.00	.00	.00	.00	.00
PODS PER PLANT		.28+	.37++	.48++	.00	.00	.33++	.04	-.10	.00
HEIGHT		.40++	.08	.29+	.00	.00	-.05	-.22	.58++	.00
100 SEED WEIGHT		.17	-.41++	.01	.00	.00	-.06	.05	.11	.00
QUALITY OF SEED		.00	.00	.00	.00	.00	-.03	.37++	-.56++	.00
PERCENT		.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 70
EXPERIMENT 161
YEAR 1978
(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
9	DAVIS	.00	270.75	23.25	4.33	20.35	.00	.00	41.7	19.8
8	FORREST	.00	239.00	24.75	4.63	18.28	.00	.00	40.7	19.2
3	BOSSIER	.00	219.25	20.50	4.65	18.03	.00	.00	42.8	19.1
15	BAGG	.00	298.75	15.00	4.33	20.30	.00	.00	43.1	19.4
7	JAMES	.00	306.50	19.75	4.13	19.10	.00	.00	42.2	20.9
11	CALLAND	.00	295.00	13.00	4.35	19.60	.00	.00	42.4	18.5
16	CRAWFORD	.00	224.25	19.50	4.25	18.53	.00	.00	42.1	20.1
5	RANSOM	.00	271.50	16.00	3.93	18.95	.00	.00	41.2	23.0
13	CUTLER 71	.00	291.25	14.50	4.13	18.08	.00	.00	39.9	21.5
1	IMPROVED PELICAN	.00	291.25	21.75	3.78	15.83	.00	.00	45.0	18.5
14	MITCHELL	.00	239.50	14.50	4.28	19.55	.00	.00	36.4	21.9
2	RILLITO	.00	199.00	22.50	4.23	16.88	.00	.00	40.0	21.3
6	PALMETTO	.00	197.50	29.75	4.05	14.70	.00	.00	42.0	17.9
4	WILLIAMS	.00	271.00	11.75	4.03	19.10	.00	.00	41.5	21.9
12	FRANKLIN	.00	285.50	13.00	4.03	17.28	.00	.00	38.9	19.5
10	GASOY 17	.00	215.25	15.50	4.15	21.08	.00	.00	42.7	18.4
	GRAND MEAN	.00	257.20	18.44	4.20	18.47	.00	.00		
	STANDARD ERROR OF A VARIETY MEAN	.00	13.71	2.39	.12	.58	.00	.00		
	COEFFICIENT OF VARIATION	.00%	10.66%	25.96%	5.71%	6.25%	.00%	.00%		
	5% LSD VARIETY MEANS (*****=NS)	.00	39.06	6.82	.34	1.64	.00	.00		
C O R R E L A T I O N S										
			(+ - PROB=.05	++ - PROB=.01)						
	YIELD	KG/HA	.12	.28+	.40++	.17	.00	.00		
	DAYS TO	FLOWER	-.15	.37++	.08	-.41++	.00	.00		
	DAYS TO	MATURITY	-.17	.48++	.29+	.01	.00	.00		
	NODULE	ABUND 1	.00	.00	.00	.00	.00	.00		
	NODULE	ABUND 2	.00	.00	.00	.00	.00	.00		
	NODULE	ACT. 1	.00	.33++	-.06	-.03	.00	.00		
	NODULE	ACT. 2	.00	.04	.05	.37++	.00	.00		
	PLANT	HEIGHT	-.10	.58++	.11	-.56++	.00	.00		
	LODGING		.00	.00	.00	.00	.00	.00		
	SHATTER		.00	.00	.00	.00	.00	.00		
	PLANTS	HARVEST	1.00	-.47++	-.27+	.10	.00	.00		
	PODS PER	PLANT	-.47++	1.00	.16	-.30+	.00	.00		
	POD	HEIGHT	-.27+	.16	1.00	.30+	.00	.00		
	100 SEED	WEIGHT	.10	-.30+	.30+	1.00	.00	.00		
	QUALITY	OF SEED	.00	.00	.00	.00	1.00	.00		
	PERCENT	GERM.	.00	.00	.00	.00	.00	1.00		

TABLE 71 EXPERIMENT 172 YEAR 1978

REGION - AFRICA
 SITE - RUBONA
 LATITUDE - 2 DEG. 29 MIN. S
 COOPERATOR - PIERRE NYABYENDA
 DATE PLANTED - MARCH 16, 1979
 AMOUNT OF MOISTURE - 483 MM
 LOCAL VARIETY - PALMETTO

COUNTRY - RWANDA
 ELEVATION - 1650 M
 LONGITUDE - 29 DEG. 46 MIN. E
 DATE HARVESTED - JULY, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
3	BOSSIER	2291.00	38.00	875.75	.00	.00	.00	.00	50.53	1.50
9	DAVIS	2209.00	41.00	1120.00	.00	.00	.00	.00	40.53	1.00
4	WILLIAMS	2072.50	34.00	783.25	.00	.00	.00	.00	33.20	1.00
6	PALMETTO	1987.00	41.00	844.75	.00	.00	.00	.00	59.70	1.75
14	MITCHELL	1972.00	34.00	782.75	.00	.00	.00	.00	39.28	1.00
2	RILLITO	1933.00	34.00	1080.00	.00	.00	.00	.00	43.65	1.00
5	RANSOM	1688.00	34.00	1040.00	.00	.00	.00	.00	26.50	1.00
8	FORREST	1587.00	38.75	862.75	.00	.00	.00	.00	41.05	1.00
11	CALLAND	1547.00	34.75	860.00	.00	.00	.00	.00	41.10	1.00
13	CUTLER 71	1527.50	34.00	860.25	.00	.00	.00	.00	43.10	1.00
7	JAMES	1525.00	34.00	801.50	.00	.00	.00	.00	46.48	1.00
16	CRAWFORD	1473.00	34.00	824.00	.00	.00	.00	.00	39.20	1.00
12	FRANKLIN	1041.50	34.25	821.50	.00	.00	.00	.00	35.55	1.00
15	BAGG	952.00	35.50	1020.00	.00	.00	.00	.00	35.83	1.00
1	IMPROVED FELICAN	856.50	52.00	1197.50	.00	.00	.00	.00	67.33	2.00
10	GASOY 17	765.50	34.25	782.75	.00	.00	.00	.00	26.98	1.00
GRAND MEAN		1589.22	36.72	909.80	.00	.00	.00	.00	41.87	1.14
STANDARD ERROR OF A VARIETY MEAN		165.96	.24	113.88	.00	.00	.00	.00	2.20	.09
COEFFICIENT OF VARIATION		20.89%	1.31%	25.03%	.00%	.00%	.00%	.00%	10.52%	16.42%
5% LSD VARIETY MEANS (*****=NS)		472.74	.69	*****	.00	.00	.00	.00	6.28	.27

CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)

YIELD	KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
YIELD	1.00	-.11	1.00	.00	.00	.00	.00	.10	.00
DAYS TO FLOWER	-.11	1.00	.19	.00	.00	.00	.00	.70++	.00
DAYS TO MATURITY	-.01	.19	1.00	.00	.00	.00	.00	.16	.02
NODULE ABUND 1	.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ABUND 2	.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE ACT. 1	.00	.00	.00	.00	.00	1.00	.00	.00	.00
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANT HEIGHT	.10	.70++	.00	.00	.00	.00	.00	1.00	.70++
LODGING	.00	.74++	.02	.00	.00	.00	.00	.70++	1.00
SHATTER	.00	.00	.00	.00	.00	.00	.00	.00	.00
HARVEST	-.04	-.13	-.08	.00	.00	.00	.00	.00	.00
PODS PER PLANT	.40++	.40++	-.15	.00	.00	.00	.00	.06	-.03
POD HEIGHT	.00	.00	.00	.00	.00	.00	.00	.42++	.00
100 SEED WEIGHT	-.42++	-.13	.00	.00	.00	.00	.00	.00	.00
QUALITY OF SEED	-.21	-.11	-.02	.00	.00	.00	.00	-.38++	-.23
PERCENT GERM.	.00	.00	.00	.00	.00	.00	.00	.11	.00

TABLE 71 EXPERIMENT 172 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
3	BOSSIER	1.00	152.75	35.10	.00	19.38	2.00	.00
9	DAVIS	1.00	153.25	23.13	.00	17.38	1.25	.00
4	WILLIAMS	1.00	221.25	13.05	.00	20.13	2.25	.00
6	PALMETTO	1.00	157.00	25.25	.00	11.38	2.25	.00
14	MITCHELL	1.00	171.00	22.68	.00	15.38	2.00	.00
2	RILLITO	1.00	151.75	17.08	.00	16.00	2.00	.00
5	RANSOM	1.00	193.25	13.50	.00	19.50	3.00	.00
8	FORREST	1.00	160.25	15.70	.00	20.75	2.00	.00
11	CALLAND	1.00	198.50	19.00	.00	20.25	4.25	.00
13	CUTLER 71	1.00	228.25	18.65	.00	20.38	4.00	.00
7	JAMES	1.00	235.00	13.55	.00	20.00	3.50	.00
16	CRAWFORD	1.00	123.50	20.85	.00	20.13	2.00	.00
12	FRANKLIN	1.00	225.00	13.10	.00	15.88	4.25	.00
15	BRAGG	1.00	174.50	9.60	.00	22.50	1.75	.00
1	IMPROVED FELICAN	1.00	188.00	25.15	.00	19.88	3.00	.00
10	GASOY 17	1.00	162.50	9.70	.00	24.75	1.25	.00
	GRAND MEAN	1.00	181.61	18.44	.00	18.98	2.55	.00
	STANDARD ERROR OF A VARIETY MEAN	.00	15.48	2.60	.00	.41	.18	.00
	COEFFICIENT OF VARIATION	.00%	17.04%	28.21%	.00%	4.36%	14.28%	.00%
	5% LSD VARIETY MEANS (*****=NS)	.00	44.08	7.41	.00	1.18	.52	.00
C O R R E L A T I O N S								
			(+ - PROB=.05	++ - PROB=.01)				
YIELD	KG/HA	.00	-.04	.40++	.00	-.42++	-.21	.00
DAYS TO FLOWER		.00	-.13	.40++	.00	-.13	-.11	.00
DAYS TO MATURITY		.00	-.08	-.15	.00	-.06	-.02	.00
NODULE ABUND 1		.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00
PLANT	HEIGHT	.00	.06	.42++	.00	-.38++	.11	.00
	LODGING	.00	-.03	.42++	.00	-.23	.00	.00
	SHATTER	1.00	.00	.00	.00	.00	.00	.00
PLANTS	HARVEST	.00	1.00	-.30+	.00	.05	.55++	.00
PODS PER	PLANT	.00	-.30+	1.00	.00	-.30+	-.09	.00
POD	HEIGHT	.00	.00	.00	1.00	.00	.00	.00
100 SEED	WEIGHT	.00	.05	-.30+	.00	1.00	-.08	.00
QUALITY	OF SEED	.00	.55++	-.09	.00	-.08	1.00	.00
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	1.00

TABLE 72 EXPERIMENT 62 YEAR 1978

REGION - AFRICA COUNTRY - SENEGAL
 SITE - CENTRE IAD/OMOS DE GUEDE ELEVATION - 10 M
 LATITUDE - 16 DEG, 30 MIN, N LONGITUDE - 15 DEG, 10 MIN, W
 COOPERATOR - DR. ING T. MOSCAL
 DATE PLANTED - AUGUST 30 1978 DATE HARVESTED - NOVEMBER 1978
 FERTILIZER USED (KG/HA) N 30, P 35.2, K 49.8
 AMOUNT OF MOISTURE - 726 MM
 NUMBER OF IRRIGATIONS - 14 (700MM)

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
13	BOSSIER	2044.99	31.00	72.00	153.00	212.75	52.00	44.50	42.75	1.00
2	UFV 1	1821.61	43.00	91.50	163.00	183.25	36.50	46.00	46.25	1.25
12	RILLITO	1800.36	43.00	84.00	235.75	351.00	41.75	27.50	49.25	1.50
16	COBB	1652.83	33.00	89.00	137.25	177.00	48.00	41.75	26.50	1.00
9	JUPITER	1580.73	46.00	108.00	214.00	244.25	46.75	46.75	58.25	1.25
14	WILLIAMS	1488.63	34.00	105.00	213.00	259.25	45.00	49.75	31.00	1.00
15	RANSOM	1457.37	34.00	90.00	194.00	219.25	43.00	44.75	34.75	1.00
7	TUNIA	1346.10	43.00	94.00	143.50	160.00	59.25	61.00	60.00	1.25
11	GASOY 17	1335.27	46.00	82.00	196.50	223.50	51.75	50.75	54.00	1.25
10	IMPROVED PELICAN	1200.24	42.00	107.00	131.50	150.50	48.00	44.50	69.00	1.75
3	SJ 2	899.35	47.00	94.00	144.25	153.75	43.00	55.00	55.25	1.50
5	ORBA	872.67	44.00	100.00	104.50	130.75	42.25	42.00	64.25	2.25
6	IAC 2	772.65	45.00	103.00	244.75	300.75	34.75	33.50	71.75	2.25
4	HARDEE L.S.	493.85	43.00	106.00	478.25	498.75	24.00	32.25	46.75	1.25
1	CH 3	256.30	44.00	110.00	252.00	297.00	32.00	41.00	61.00	1.50
8	CARIBE	83.35	45.00	120.00	142.25	195.00	40.50	42.00	77.25	2.50
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		1194.15	41.44	97.22	196.72	234.80	43.03	43.94	53.00	1.47
COEFFICIENT OF VARIATION		160.10	.00	.38	55.71	55.04	7.97	5.93	4.27	.26
5% LSD VARIETY MEANS (*****=NS)		26.81%	.00%	.77%	56.64%	46.88%	37.04%	27.01%	16.10%	34.88%
		456.04	.00	1.07	158.69	156.77	*****	16.90	12.15	.73
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
YIELD KG/HA	1.00									
DAYS TO FLOWER	-.47++	1.00								
DAYS TO MATURITY	-.67++	1.00								
NODULE ABUND 1	-.67++	-.43++	1.00							
NODULE ABUND 2	-.14	.13	.13	1.00						
NODULE ACT. 1	-.09	.08	.09	.09	1.00					
NODULE ACT. 2	.16	-.21	-.13	-.21	-.56++	1.00				
PLANT HEIGHT	-.01	-.00	-.05	-.05	-.47++	-.56++	1.00			
LODGING	-.46++	.66++	.42++	.41++	-.07	-.05	-.08	1.00		
SHATTER	-.41++	.04	.06	.03	-.07	-.05	-.08	-.08	1.00	
HARVEST	.42++	.42++	-.33++	-.33++	.00	.05	.15	.12	.19	.14
PODS PER PLANT	-.39++	.26+	.26+	.22	.01	.06	.02	.07	.06	.06
100 SEED WEIGHT	-.30+	.35++	.20	.22	.22	.17	-.27+	.13	.30+	.38++
QUALITY OF SEED	.48++	-.22	-.39++	.20	.18	.22	.09	-.31+	.37++	.38++
PERCENT GERM.	-.64++	.54++	.55++	.55++	.11	-.16	-.14	.20	-.43++	.23
	.27+	.29+	.24	.24	.10	.09	-.00	-.04	.45++	.13

TABLE 72 EXPERIMENT 62 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
13	BOSSIER	1.00	138.75	33.25	6.25	12.95	1.00	66.50
2	UFV 1	1.50	161.50	59.50	6.50	13.75	3.00	85.00
12	RILLITO	2.00	171.50	51.50	6.75	12.28	2.25	85.00
16	COBB	1.75	143.00	46.75	5.00	13.63	1.25	56.50
9	JUPITER	1.75	72.25	54.75	6.50	12.78	2.75	87.25
14	WILLIAMS	1.50	124.75	39.25	5.50	13.55	1.75	22.00
15	RANSOM	2.50	107.25	68.25	5.75	12.10	2.00	68.50
7	TUNIA	1.75	73.00	100.25	5.25	13.00	3.00	81.50
11	GASOY 17	2.00	51.25	61.00	6.25	13.93	1.75	52.00
10	IMPROVED PELICAN	2.00	110.75	63.25	6.25	11.85	2.50	83.50
3	SJ 2	1.50	92.50	65.00	7.50	12.50	3.50	79.50
5	ORBA	2.50	101.25	65.50	6.75	11.35	2.00	60.50
6	IAC 2	1.75	130.25	59.50	9.25	12.23	3.25	68.00
4	HARUEE L.S.	1.25	66.50	72.25	8.00	12.00	3.25	77.50
1	CH 3	1.75	70.75	107.00	7.75	12.50	4.75	66.00
8	CARIBE	1.25	59.00	70.00	6.50	11.43	4.00	29.00
GRAND MEAN								
		1.73	104.64	63.56	6.61	12.61	2.63	66.77
STANDARD ERROR OF A VARIETY MEAN		.35	20.79	14.93	.71	.36	.42	2.58
COEFFICIENT OF VARIATION		40.04%	39.74%	46.98%	21.50%	5.77%	31.81%	7.74%
5% LSD VARIETY MEANS (*****=NS) *****		*****	59.22	*****	2.02	1.04	1.19	7.36
C O R R E L A T I O N S								
			(+ - PROB=.05			++ - PROB=.01)		
YIELD	KG/HA	.04	.42++	-.39++	-.30+	.48++	-.64++	.27+
DAYS TO FLOWER		.06	-.33++	.26+	.35++	-.22	.54++	.29+
DAYS TO MATURITY		-.03	-.33++	.22	.20	-.39++	.55++	-.24
NODULE ABUND 1		.00	-.01	.22	.18	-.11	.11	.10
NODULE ABUND 2		-.05	.06	.17	.22	-.16	.07	.09
NODULE ACT. 1		.15	.02	.13	-.27+	.09	-.14	-.00
NODULE ACT. 2		.12	-.07	.20	-.31+	.20	.07	-.04
PLANT HEIGHT		.19	-.06	.30+	.37++	-.37++	.45++	.10
LODGING		.14	.06	-.12	.38++	-.43++	.23	-.13
SHATTER		1.00	.26+	.17	.14	.04	-.01	.02
HARVEST		.26+	1.00	-.20	.13	.15	-.27+	.10
PLANTS PER PLANT		.17	-.20	1.00	-.11	-.19	.40++	.13
POD HEIGHT		.14	.13	-.11	1.00	-.20	.23	.07
100 SEED WEIGHT		.04	.15	-.19	-.20	1.00	-.27+	-.06
QUALITY OF SEED		-.01	-.27+	.40++	.23	-.27+	1.00	.08
PERCENT GERM.		.02	.10	.13	.07	-.06	.08	1.00

TABLE 73

EXPERIMENT 42

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
9	JUPITER	1.00	196.25	24.75	10.50	22.78	2.50	28.25	41.8	23.9
8	CARIBE	2.50	115.75	86.75	8.25	13.75	2.75	44.75	44.7	19.8
12	BOSSIER	1.00	208.75	22.75	8.50	17.13	2.25	55.25	40.4	23.9
2	UFV-1	2.00	177.25	22.00	8.50	20.25	3.50	66.00	43.2	21.8
13	WILLIAMS	1.00	267.25	9.75	8.75	20.25	2.50	52.75	42.4	24.4
4	HARDEE LS	1.50	91.25	42.00	8.25	17.45	2.75	47.50	41.1	24.3
15	COBB	1.25	230.50	14.00	8.25	16.25	2.00	49.50	38.5	24.2
10	IMPROVED PELICAN	1.75	270.25	20.00	9.75	13.00	3.00	60.75	40.0	24.3
14	RANSOM	2.00	181.25	15.00	7.50	17.50	2.00	19.00	39.2	26.5
1	CH-3	2.50	113.25	23.50	8.50	15.75	3.25	30.50	42.7	20.8
16	GASOY 17	1.00	217.75	11.00	7.50	16.50	2.25	55.50	39.7	23.6
3	SJ-2	3.25	150.25	24.25	9.50	12.28	3.00	49.50	37.7	24.0
5	ORCA	3.25	149.00	22.00	8.75	12.63	3.00	73.00	38.6	21.6
6	IAC-2	2.25	121.50	23.25	10.00	14.75	2.75	34.75	40.2	24.0
7	TUNIA	2.25	85.75	19.50	9.00	19.88	3.50	42.75	41.9	22.0
11	RILLITO	1.25	91.25	21.50	6.50	16.63	2.75	30.25	40.6	24.9
GRAND MEAN										
1.86										
25.13										
8.63										
.51										
11.75%										
1.44										
1.76										
7.53%										
18.75%										
.73										
36.42%										
23.99										
5% LSD VARIETY MEANS (*****NS)										
.82										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD										
KB/HA										
-.28+										
.16										
.37++										
.11										
.00										
.19										
.00										
.29+										
.12										
.11										
.37++										
1.00										
-.37++										
.19										
.13										
-.44++										
.34++										
.10										
-.31+										
.01										
1.00										

TABLE 74 EXPERIMENT 24 YEAR 1978

REGION - AFRICA COUNTRY - SUDAN
 SITE - ABU-NAAMA ELEVATION - 0 M
 LATITUDE - 12 DEG. 44 MIN. N LONGITUDE - 34 DEG. 8 MIN. E
 COOPERATOR - FATHI MOHAMAD KHALIFA DATE HARVESTED NOVEMBER, 1978
 DATE PLANTED - JULY 18, 1978
 SOIL TYPE - SAND 14%, SILT 18%, CLAY 68%, PH 9.1
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4
 AMOUNT OF MOISTURE - 300 MM
 NUMBER OF IRRIGATIONS - 11

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
2	UFV-1	1093.97	33.25	116.25	4.00	3.50	60.00	82.50	28.25	1.50
8	CARIBE	1027.29	45.50	126.50	4.00	3.75	65.00	81.25	65.75	2.25
15	COBB	1010.62	40.25	113.25	4.25	3.50	56.25	83.75	32.50	1.75
7	TUNIA	904.35	33.25	108.50	4.25	3.50	70.00	81.25	33.25	2.50
16	GASOY 17	814.75	35.25	110.00	4.00	2.75	73.75	88.75	25.75	1.75
13	WILLIAMS	781.41	34.25	103.25	4.00	3.25	81.25	87.50	29.50	2.75
14	RANSOM	773.07	33.50	108.50	3.25	1.25	78.75	78.75	29.75	1.50
11	RILLITO	770.99	34.50	100.75	4.00	2.75	83.75	87.50	32.50	3.00
4	HARDEE LS	766.82	45.50	118.50	3.50	3.25	55.00	78.75	38.50	2.25
9	JUPITER	743.90	45.00	114.50	4.00	3.75	58.75	88.75	40.50	2.00
5	ORBA	727.23	35.25	98.50	3.50	2.50	82.50	86.25	44.25	4.75
12	ROSSIER	689.72	39.25	108.00	4.00	3.00	78.75	77.50	36.50	2.00
6	IAC-2	493.85	38.50	117.00	4.50	3.25	37.50	88.75	42.50	3.00
10	IMPROVED PELICAN	487.60	42.00	98.75	4.25	4.00	62.50	91.25	39.50	2.50
3	SJ-2	483.43	37.75	103.50	4.25	4.00	55.00	80.00	41.75	2.00
1	CH-3	356.32	34.50	121.50	3.75	3.50	56.25	86.25	52.25	3.50
	GRAND MEAN	745.33	37.97	110.45	3.97	3.22	65.94	84.30	38.31	2.50
	STANDARD ERROR OF A VARIETY MEAN	142.11	2.95	3.66	.31	.48	9.70	3.62	2.99	.41
	COEFFICIENT OF VARIATION	38.13%	15.54%	6.63%	15.40%	29.72%	29.44%	8.59%	15.63%	33.13%
	5% LSD VARIETY MEANS (*****=NS)	404.79	8.40	10.43	*****	1.36	*****	*****	8.53	1.18

CORRELATIONS

(+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
1.00	-.04	1.00	.17	-.09	.07	-.09	-.11	-.28+
-.04	1.00	.26+	.05	.29+	-.21	.03	.29+	-.15
.00	.26+	1.00	.01	.15	-.13	.18	.36++	-.21
.17	.05	.01	1.00	.41++	-.19	.06	.02	-.02
-.09	.29+	.15	.41++	1.00	-.29+	-.02	.25+	.06
.07	-.21	-.13	-.19	-.29+	1.00	-.01	-.22	-.10
-.09	.03	.18	.06	-.02	-.01	1.00	-.02	.17
-.11	.36++	.29+	.02	.25+	-.22	-.02	1.00	.45++
-.28+	-.15	-.21	-.02	.06	-.10	.17	.45++	1.00
-.27+	-.22	-.38++	-.16	-.09	.01	.17	-.06	.38++
.35++	-.02	-.22	.05	-.18	.29+	.08	-.13	-.20
.04	.25+	.55++	-.15	.04	-.09	-.12	.45++	-.11
-.14	.09	-.11	-.08	.04	-.06	.09	.60++	.68++
.27+	.11	.10	-.12	-.25+	.19	-.05	-.30+	-.39++
-.21	-.01	-.25+	.02	.05	-.12	-.12	-.19	.02
-.11	.02	.10	-.13	-.05	-.26+	-.05	.18	.24

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	FOOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
2	UFV-1	1.50	155.50	36.25	8.25	11.48	3.25	61.00	47.0	17.0
8	CARIBE	1.25	179.50	52.75	12.50	11.88	3.00	53.00	48.6	17.8
15	COBB	2.00	167.75	32.50	9.50	13.73	2.75	66.00	43.2	20.8
7	TUNIA	2.00	173.75	20.75	9.50	14.03	3.75	38.00	43.8	18.2
16	GASOY 17	2.00	183.00	28.25	7.50	11.83	3.25	52.00	44.2	18.6
13	WILLIAMS	2.00	183.75	22.75	10.00	13.78	3.75	50.00	45.1	18.0
14	RANSOM	2.50	175.25	30.00	10.25	13.75	2.75	53.00	45.4	22.7
11	RILLITO	2.00	178.75	33.75	8.50	12.75	3.50	23.00	41.6	22.9
4	HARDEE LS	2.00	160.75	39.00	10.75	14.00	2.50	72.00	42.0	22.2
9	JUPITER	1.75	166.25	35.00	11.50	11.70	3.00	53.00	42.6	23.4
5	ORBA	4.25	180.50	24.25	18.75	9.88	3.50	76.00	41.6	22.9
12	BOSSIER	1.75	174.00	33.50	9.50	12.28	4.25	46.00	46.4	18.7
6	IAC-2	2.25	173.25	33.75	12.00	13.10	3.50	63.00	45.3	21.7
10	IMPROVED PELICAN	3.25	191.75	19.25	12.75	10.28	3.25	64.00	45.1	21.9
3	SJ-2	2.25	155.25	35.00	11.50	10.75	3.75	54.00	42.9	20.5
1	CH-3	2.00	152.25	36.00	12.50	10.53	2.25	78.00	44.0	18.9
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE AROUND 1										
NODULE AROUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
NODULE PLANT										
LODGING										
SHATTER										
HARVEST										
PLANTS										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 75

EXPERIMENT 49

YEAR 1978

REGION - AFRICA
 SITE - HALIMA
 LATITUDE - 7 DEG. N
 COOPERATOR - D. HOPKINSON
 DATE PLANTED - JULY 22, 1978
 SOIL TYPE - SAND 71% SILT 20%, CLAY 9%, PH 6.7
 AMOUNT OF MOISTURE - 721 MM

COUNTRY - SUDAN
 ELEVATION - 450 M
 LONGITUDE - 28 DEG. E

DATE HARVESTED - OCTOBER 10, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
9	JUPITER	1439.87	40.25	.00	4.00	4.00	100.00	97.50	46.33	1.00
6	IAC-2	1414.87	33.00	.00	4.00	4.00	100.00	95.00	57.18	1.75
12	BOSSIER	1324.01	33.00	.00	4.00	3.75	100.00	98.75	41.80	1.00
5	OREA	1321.10	33.00	.00	4.00	4.00	100.00	92.50	53.30	2.75
3	SJ-2	1214.83	34.50	.00	4.00	4.00	100.00	92.50	46.73	1.25
2	UFV-1	1191.90	33.00	.00	4.00	3.75	97.50	93.75	29.10	1.00
8	CARIBE	1150.23	33.00	.00	4.00	4.00	100.00	98.75	63.90	1.25
7	TUNIA	1127.31	30.00	.00	4.00	3.75	98.75	96.25	40.03	1.00
10	IMPROVED PELICAN	1098.14	33.00	.00	4.00	4.00	100.00	78.75	44.63	1.50
15	COBB	1098.14	24.25	.00	4.00	4.00	98.75	82.50	27.23	1.25
13	WILLIAMS	1096.05	21.00	.00	4.00	4.00	95.00	73.75	35.43	3.50
4	HARDEE LS	1090.22	39.75	.00	4.00	3.50	100.00	93.75	30.05	1.00
1	CH-3	1018.95	33.00	.00	4.00	4.00	100.00	92.50	62.13	1.75
11	RILLITO	964.78	25.25	.00	4.00	4.00	100.00	82.50	36.33	2.00
14	RANSOM	737.65	23.00	.00	4.00	4.00	100.00	75.00	25.23	1.50
16	GASOY 17	529.27	21.00	.00	4.00	4.00	100.00	81.25	23.33	2.00
GRAND MEAN		1113.58	30.63	.00	4.00	3.92	99.38	89.06	41.42	1.59
STANDARD ERROR OF A VARIETY MEAN		158.50	.36	.00	.00	.13	1.08	4.78	2.68	.22
COEFFICIENT OF VARIATION		28.47%	2.33%	.00%	.00%	6.67%	2.17%	10.74%	12.93%	27.96%
5% LSD VARIETY MEANS (*****=NS)		451.46	1.02	.00	.00	*****	*****	13.63	7.63	.63

CORRELATIONS

(+ - PROB=.05 ++ - PROB=.01)

YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA
DAYS TO FLOWER	.39++	1.00	.39++	.00	.00	.00	.00	.00	.00	.00	.00
DAYS TO MATURITY	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1	.13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2	.21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANT HEIGHT	.53++	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
LODGING	-.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SHATTER	.16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
HARVEST	.38++	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANT	.48++	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PODS PER	.22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100 SEED	.17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
QUALITY	-.17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PERCENT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
9	JUPITER	1.25	120.00	33.50	10.50	18.73	3.50	.00
6	IAC-2	1.00	120.25	30.75	13.25	16.98	2.25	.00
12	BOSSIER	1.00	131.25	23.00	7.25	17.75	3.25	.00
5	ORBA	1.00	128.50	31.25	12.50	12.95	2.25	.00
3	SJ-2	1.00	99.75	21.25	11.75	14.98	2.50	.00
2	UFV-1	1.00	118.50	27.00	5.13	16.73	2.25	.00
8	CARIBE	2.25	129.75	29.25	8.25	13.98	2.75	.00
7	TUNIA	1.00	113.50	20.00	8.75	19.30	3.25	.00
10	IMPROVED PELICAN	1.00	140.50	25.50	11.50	13.53	2.25	.00
15	COBB	1.00	146.50	22.00	8.50	16.60	3.00	.00
13	WILLIAMS	1.00	118.25	21.00	8.75	17.18	2.00	.00
4	HARDEE LS	1.00	132.00	28.75	8.00	17.53	3.50	.00
1	CH-3	1.00	97.00	18.50	11.00	14.33	3.25	.00
11	RILLITO	1.00	138.75	31.50	9.00	15.45	2.50	.00
14	RANSOM	1.00	116.00	18.75	6.50	17.88	3.75	.00
16	GASOY 17	1.00	118.50	14.25	7.75	15.33	3.50	.00
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN		1.09	123.06	24.77	9.27	16.20	2.86	.00
COEFFICIENT OF VARIATION		.13	7.30	4.60	1.11	.58	.32	.00
5% LSD VARIETY MEANS (*****=NS)		24.33%	11.86%	37.11%	23.94%	7.17%	22.47%	.00%
		.38	20.78	*****	3.16	1.66	.92	.00
C O R R E L A T I O N S								
			(+ - PROB=.05		++ - PROB=.01)			
YIELD	KG/HA	.16	.38++	.48++	.22	.17	.17	.00
DAYS TO	FLOWER	.15	-.08	.33++	.25+	.01	.04	.00
DAYS TO	MATURITY	.00	.00	.00	.00	.00	.00	.00
NODULE	ABUND 1	.00	.00	.00	.00	.00	.00	.00
NODULE	ABUND 2	.07	.01	.16	.39++	-.23	-.13	.00
NODULE	ACT. 1	.07	.08	-.08	.16	-.13	.26+	.00
NODULE	ACT. 2	.21	-.07	.06	.02	.01	.09	.00
PLANT	HEIGHT	.39++	-.04	.30+	.49++	-.33++	-.12	.00
LODGING		-.08	-.10	.01	.28+	-.28+	-.29+	.00
SHATTER		1.00	.07	.25+	-.11	-.12	.04	.00
HARVEST		.07	1.00	.19	-.02	-.00	-.11	.00
PLANTS	PER	.25+	.19	1.00	.13	.02	.01	.00
PODS PER	PLANT	-.11	-.02	.13	1.00	-.34++	-.21	.00
POD	HEIGHT	-.12	-.00	.02	-.34++	1.00	.26+	.00
100 SEED	WEIGHT	.04	-.11	.01	-.21	.26+	1.00	.00
QUALITY	OF SEED	.00	.00	.00	.00	.00	.00	1.00
PERCENT	GERM.							

TABLE 76 EXPERIMENT 165 YEAR 1978

REGION - AFRICA
 SITE - KADUGLI
 LATITUDE - 11 DEG. N
 COOPERATOR - OMER E. SIMSAA

COUNTRY - SUDAN

LONGITUDE - 30 DEG. E

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
16	CRAWFORD	1748.18	19.50	.00	.00	.00	.00	.00	52.55	.00
5	RANSOM	1744.89	25.50	.00	.00	.00	.00	.00	30.50	.00
6	COBB	1720.34	24.00	.00	.00	.00	.00	.00	36.25	.00
8	FORREST	1613.32	27.00	.00	.00	.00	.00	.00	33.20	.00
14	MITCHELL	1599.99	18.00	.00	.00	.00	.00	.00	51.05	.00
13	CUTLER 71	1531.26	19.50	.00	.00	.00	.00	.00	51.70	.00
3	BOSSIER	1457.54	35.75	.00	.00	.00	.00	.00	41.15	.00
11	CALLAND	1434.00	18.00	.00	.00	.00	.00	.00	40.10	.00
9	DAVIS	1383.78	29.75	.00	.00	.00	.00	.00	28.15	.00
10	GASOY 17	1348.94	18.00	.00	.00	.00	.00	.00	25.35	.00
12	FRANKLIN	1297.05	18.00	.00	.00	.00	.00	.00	42.00	.00
4	WILLIAMS	1218.08	18.00	.00	.00	.00	.00	.00	44.10	.00
15	BRAGG	1213.24	24.75	.00	.00	.00	.00	.00	33.55	.00
1	IMPROVED PELICAN	1208.20	34.00	.00	.00	.00	.00	.00	48.60	.00
7	JAMES	1205.66	23.25	.00	.00	.00	.00	.00	46.50	.00
2	RILLITO	1115.89	26.25	.00	.00	.00	.00	.00	42.50	.00
GRAND MEAN		1427.52	23.70	.00	.00	.00	.00	.00	40.45	.00
STANDARD ERROR OF A VARIETY MEAN		202.05	1.00	.00	.00	.00	.00	.00	3.72	.00
COEFFICIENT OF VARIATION		28.31%	8.43%	.00%	.00%	.00%	.00%	.00%	18.39%	.00%
5% LSD VARIETY MEANS (*****=NS)		*****	2.85	.00	.00	.00	.00	.00	10.60	.00
CORRELATIONS										
			(+ - PROB=.05			++ - PROB=.01)				
YIELD	KG/HA	1.00	.00	.00	.00	.00	.00	.00	.46++	.00
DAYS TO FLOWER		-.15	1.00	.00	.00	.00	.00	.00	-.23	.00
DAYS TO MATURITY		.00	.00	1.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 1		.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	1.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANT HEIGHT		.46++	-.23	.00	.00	.00	.00	.00	1.00	.00
LODGING		.00	.00	.00	.00	.00	.00	.00	.00	.00
SHATTER		.00	.00	.00	.00	.00	.00	.00	.00	.00
HARVEST		.30+	-.26+	.00	.00	.00	.00	.00	.00	.00
PLANTS		.17	-.05	.00	.00	.00	.00	.00	.29+	.00
PODS PER PLANT		-.06	.10	.00	.00	.00	.00	.00	.15	.00
100 SEED WEIGHT		.27+	-.36++	.00	.00	.00	.00	.00	.30+	.00
QUALITY OF SEED		-.57++	.26+	.00	.00	.00	.00	.00	.07	.00
PERCENT GERM.		.31+	.00	.00	.00	.00	.00	.00	-.27+	.00
									.26+	.00

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
16	CRAWFORD	.00	117.50	29.50	7.85	15.10	2.25	89.75
5	RANSOM	.00	220.25	20.90	8.15	13.90	2.50	86.00
6	COBB	.00	147.25	26.25	7.55	14.95	2.00	89.25
8	FORREST	.00	122.50	29.60	8.45	12.70	4.75	56.25
14	MITCHELL	.00	138.50	21.10	8.20	14.65	3.25	66.25
13	CUTLER 71	.00	223.00	18.55	10.90	14.75	2.75	70.75
3	BOSSIER	.00	151.25	21.90	11.10	13.15	3.25	85.25
11	CALLAND	.00	219.50	9.80	13.45	12.90	3.25	44.25
9	DAVIS	.00	124.75	23.80	6.00	14.55	2.75	56.75
10	GASOY 17	.00	178.00	17.50	6.70	14.35	2.25	90.00
12	FRANKLIN	.00	167.50	69.50	8.10	13.43	3.00	75.00
4	WILLIAMS	.00	213.00	15.20	9.80	14.43	3.25	86.75
15	BAGG	.00	194.50	15.90	10.75	13.30	3.75	66.50
1	IMPROVED PELICAN	.00	201.00	20.65	14.40	10.63	4.00	82.00
7	JAMES	.00	191.50	13.90	11.65	13.50	2.25	71.00
2	RILLITO	.00	116.75	26.60	7.28	12.70	4.00	85.75
	GRAND MEAN	.00	170.42	23.79	9.40	13.69	3.08	75.09
	STANDARD ERROR OF A VARIETY MEAN	.00	16.81	13.46	1.22	.63	.44	7.08
	COEFFICIENT OF VARIATION	.00%	19.73%	113.15%	25.93%	9.27%	28.58%	18.86%
	5% LSD VARIETY MEANS (*****=NS)	.00	47.89	*****	3.47	1.81	1.25	20.17

C O R R E L A T I O N S

++ - PROB=.01)

(+ - PROB=.05

YIELD KG/HA	+	-	PROB=.05
DAYS TO FLOWER	.00	.30+	.17
DAYS TO MATURITY	.00	-.26+	-.05
NODULE ABUND 1	.00	.00	.00
NODULE ABUND 2	.00	.00	.00
NODULE ACT. 1	.00	.00	.00
NODULE ACT. 2	.00	.00	.00
PLANT HEIGHT	.00	.29+	.15
LODGING	.00	.00	.00
SHATTER	1.00	.00	.00
HARVEST	.00	1.00	.47++
PLANT	.00	-.20	1.00
POD HEIGHT	.00	.47++	-.10
WEIGHT	.00	-.15	.35++
QUALITY OF SEED	.00	-.31+	-.20
PERCENT GERM.	.00	.19	.16

TABLE 77 EXPERIMENT 12 YEAR 1978

REGION - AFRICA COUNTRY - SUDAN
 SITE - WAD MEDANI ELEVATION - 400 M
 LATITUDE - 14 DEG. 24 MIN. N LONGITUDE - 33 DEG. 29 MIN. E
 COOPERATOR - OSMAN A.A. AGEED
 DATE PLANTED - JULY 6, 1978 DATE HARVESTED - OCTOBER, 1978
 SOIL TYPE - VERTISOL, SULEIMI SERIES, SAND 30%, SILT 18%, CLAY 52%, PH 8.5
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 254 MM
 NUMBER OF IRRIGATIONS - 9

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
4	HARDEE LS	2714.29	46.00	109.50	2.00	1.50	92.50	100.00	43.00	1.00
9	JUPITER	2622.61	44.00	98.50	3.00	1.50	95.00	100.00	55.75	1.00
2	UFV-1	2515.92	39.00	104.50	2.50	1.50	96.25	96.25	28.75	1.00
8	CARIBE	2439.24	46.50	117.00	2.50	2.00	98.75	100.00	79.50	1.00
16	COBB	2179.19	28.00	94.25	2.25	2.00	98.75	100.00	31.00	1.00
14	WILLIAMS	2101.25	23.00	88.00	2.50	1.50	93.75	100.00	33.50	1.00
12	RILLITO	1899.55	28.00	96.00	2.00	1.50	92.50	100.00	37.25	1.00
6	IAC-2	1894.13	42.00	107.00	2.50	1.50	96.25	98.75	59.00	1.50
15	RANSOM	1890.38	25.00	87.25	1.50	1.75	98.75	100.00	26.00	1.00
13	BOSSIER	1861.21	34.00	88.00	2.50	1.75	98.75	100.00	40.25	1.00
5	ORBA	1590.73	42.00	91.25	2.00	2.00	96.25	95.00	63.75	1.50
10	IMPROVED FELICAN	1550.31	34.50	93.50	4.00	2.50	93.75	87.50	53.50	1.00
7	TUNIA	1509.89	34.50	119.75	2.25	2.00	98.75	95.00	48.00	1.00
3	SJ-2	1231.50	42.00	85.50	4.00	2.00	96.25	98.75	49.25	1.00
1	CH-3	1200.24	37.50	117.00	2.00	1.25	100.00	96.25	75.25	2.00
11	KAHALA	1123.56	28.00	78.00	2.25	2.50	95.00	100.00	34.00	1.00
GRAND MEAN		1895.25	35.88	98.44	2.48	1.80	96.33	97.89	47.36	1.13
STANDARD ERROR OF A VARIETY MEAN		201.30	.91	1.46	.39	.29	3.17	2.75	2.30	.10
COEFFICIENT OF VARIATION		21.24%	5.08%	2.97%	31.37%	32.48%	6.58%	5.61%	9.70%	18.14%
5% LSD VARIETY MEANS (*****=NS)		573.37	2.60	4.16	1.11	*****	*****	*****	6.54	.29

CORRELATIONS

(+ - PROB=.05 ++ - PROB=.01)

YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA
DAYS TO FLOWER	.22	1.00	.22	.20	.51++	-.09	-.30+	-.08	.19	-.29+	.19
DAYS TO MATURITY	.20	.51++	1.00	1.00	.51++	.15	-.06	-.02	.01	.64++	.19
NODULE ABUND 1	-.09	.15	1.00	-.17	1.00	-.17	-.22	.10	-.07	.52++	.29+
NODULE ABUND 2	-.30+	-.06	-.06	-.22	.35++	1.00	.35++	-.11	-.13	.13	-.19
NODULE ACT. 1	-.08	-.02	-.02	-.02	.35++	.05	.05	.05	-.03	-.26+	-.26+
NODULE ACT. 2	.19	.01	.01	.10	.11	.05	.05	1.00	-.16	.08	.11
PLANT HEIGHT	-.10	.64++	.64++	-.07	-.03	-.03	-.03	-.16	1.00	-.08	-.11
LODGING	-.29+	.19	.29+	.29+	-.04	.08	.08	.08	1.00	.49++	.49++
SHATTER	-.63++	-.63++	-.63++	-.44++	.43++	.01	.01	.01	-.03	.18	.04
HARVEST	-.21	-.47++	-.47++	-.44++	.24	-.04	-.04	-.04	-.00	-.34++	-.06
PODS PER PLANT	-.02	-.73++	-.73++	-.49++	.16	.16	.16	.16	.12	.64++	.22
POD HEIGHT	-.03	.70++	.70++	.37++	-.13	-.13	-.13	-.13	.02	.67++	.28+
100 SEED WEIGHT	.10	.48++	.48++	.51++	-.04	-.04	-.04	-.04	.02	-.60++	-.09
QUALITY OF SEED	-.52++	-.57++	-.57++	-.46++	-.23	-.23	-.23	-.23	-.15	-.47++	-.11
PERCENT GERM.	-.14	-.64++	-.64++	-.01	.18	.18	.18	.18	.01	.19	.31+

TABLE 77 EXPERIMENT 12 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
4	HARDEE LS	1.00	162.50	30.25	10.00	15.23	2.00	32.50	46.5	18.0
9	JUPITER	1.00	190.75	37.00	13.00	14.45	2.00	36.25	40.8	25.4
2	UFV-1	1.00	167.00	32.75	8.75	16.58	2.25	52.50	45.8	21.1
8	CARIBE	1.00	171.00	46.75	12.00	11.45	1.00	36.25	46.8	19.0
16	COBB	3.00	230.25	26.50	9.50	15.68	2.50	73.75	41.1	24.3
14	WILLIAMS	2.00	268.75	15.00	8.50	18.95	3.00	22.50	45.1	24.4
12	RILLITO	2.00	205.00	25.75	7.75	15.38	3.75	23.75	45.7	22.1
6	IAC-2	2.00	160.50	35.00	12.25	16.20	1.75	47.50	43.5	22.9
15	RANSOM	2.00	241.75	18.25	8.25	16.88	3.75	38.75	43.6	24.3
13	BOSSIER	2.00	207.75	29.00	9.75	16.03	3.00	27.50	43.8	22.5
5	ORBA	3.00	204.25	34.50	9.50	12.38	2.75	88.75	41.4	20.9
10	IMPROVED PELICAN	2.50	239.75	27.50	10.50	13.00	2.75	57.50	45.4	23.6
7	TUNIA	3.00	206.00	29.00	12.25	16.80	3.25	38.75	46.0	16.8
3	SJ-2	2.25	168.00	42.75	10.50	13.00	2.75	77.50	43.1	22.0
1	CH-3	2.00	206.00	35.75	13.00	14.98	2.25	61.25	43.3	20.9
11	KAHALA	4.50	260.00	23.50	9.50	15.75	3.50	27.50	47.4	20.7
GRAND MEAN										
		2.14	205.58	30.58	10.31	15.17	2.64	46.41		
STANDARD ERROR OF A VARIETY MEAN		.12	10.76	3.55	.60	.56	.32	10.29		
COEFFICIENT OF VARIATION		11.45%	10.46%	23.20%	11.72%	7.38%	24.17%	44.34%		
5% LSD VARIETY MEANS (*****=NS)		.35	30.64	10.11	1.72	1.60	.91	29.31		
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)										
YIELD KG/HA		-.63++	-.21	-.02	-.03	.10	-.52++	-.14		
DAYS TO FLOWER		-.47++	-.73++	.70++	.48++	-.57++	-.64++	.25+		
DAYS TO MATURITY		-.44++	-.49++	.37++	.51++	-.11	-.46++	-.01		
NODULE ABUND 1		-.02	-.03	.15	.15	-.23	-.10	.18		
NODULE ABUND 2		.43++	.24	-.13	-.04	-.28+	.12	.26+		
NODULE ACT. 1		.01	-.04	.16	.20	-.02	.02	.10		
NODULE ACT. 2		-.03	-.00	.12	.02	.02	.15	.01		
PLANT HEIGHT		-.18	-.34++	.64++	.67++	-.60++	-.47++	.19		
LODGING		.04	-.06	.22	.28+	-.09	-.11	.31+		
SHATTER		1.00	.50++	-.26+	.13	.06	.45++	.16		
PLANTS HARVEST		.50++	1.00	-.59++	-.27+	.33++	.40++	-.02		
PODS PER PLANT		-.26+	-.59++	1.00	.42++	.59++	.39++	.32++		
FOOD HEIGHT		-.13	-.27+	.42++	1.00	-.26+	-.40++	.13		
100 SEED WEIGHT		.06	.33++	-.59++	-.26+	1.00	.23	-.33++		
QUALITY OF SEED		.45++	.40++	-.39++	-.40++	.23	1.00	-.23		
PERCENT GERMINATION		.16	-.02	.32++	.13	-.33++	-.23	1.00		

TABLE 78 EXPERIMENT 14 YEAR 1978

REGION - AFRICA COUNTRY - TANZANIA
 SITE - MOROGORO ELEVATION - 525 M
 LATITUDE - 5 DEG. 80 MIN. S LONGITUDE - 37 DEG. E
 COOPERATOR - K.W. MAY DATE HARVESTED - JULY, 1978
 DATE PLANTED - APRIL 8, 1978
 SOIL TYPE - SILT 62%, SILT 16%, CLAY 22%, PH 6.6
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4
 AMOUNT OF MOISTURE - 232 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NOODLE ABUND 1	NOODLE ABUND 2	NOODLE ACT. 1	NOODLE ACT. 2	PLANT HEIGHT	LODGING
11	RILLITO	1281.51	71.00	114.00	.00	.00	.00	.00	38.30	1.00
13	WILLIAMS	1246.08	71.00	114.00	.00	.00	.00	.00	40.00	1.00
6	IAC-2	1104.39	89.00	123.00	.00	.00	.00	.00	57.30	1.00
14	RANSOM	1046.04	71.00	124.00	.00	.00	.00	.00	29.55	1.00
5	ORBA	1008.53	73.00	114.00	.00	.00	.00	.00	52.65	1.00
2	UFV-1	958.52	75.00	132.00	.00	.00	.00	.00	31.50	1.00
12	BOSSIER	937.69	76.00	126.00	.00	.00	.00	.00	49.40	1.00
7	TUNIA	887.68	71.00	134.00	.00	.00	.00	.00	57.15	1.00
15	COBB	877.26	71.00	135.50	.00	.00	.00	.00	30.00	1.00
10	IMPROVED PELICAN	854.34	75.00	120.00	.00	.00	.00	.00	54.80	1.00
8	CARIBE	854.34	73.00	122.00	.00	.00	.00	.00	53.55	1.00
4	HARDEE LS	654.30	85.50	140.75	.00	.00	.00	.00	61.55	1.00
9	JUPITER	614.71	80.50	132.50	.00	.00	.00	.00	68.95	1.00
3	SJ-2	604.29	79.50	135.50	.00	.00	.00	.00	64.65	1.00
16	GASOY 17	552.19	71.00	143.00	.00	.00	.00	.00	27.85	1.00
1	CH-3	285.47	74.50	139.50	.00	.00	.00	.00	66.35	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00								
DAYS TO FLOWER		-.13								
DAYS TO MATURITY		1.00								
NOODLE ABUND 1		-.65++								
NOODLE ABUND 2		.00								
NOODLE ACT. 1		.00								
NOODLE ACT. 2		.00								
PLANT HEIGHT		-.29+								
LODGING		.00								
SHATTER		-.04								
HARVEST		.16								
PODS PER PLANT		-.02								
POD HEIGHT		-.39++								
100 SEED WEIGHT		.21								
QUALITY OF SEED		-.73++								
PERCENT GERM.		.00								

TABLE 78
EXPERIMENT 14
YEAR 1978
(CONTINUED)

[illegible]

TABLE 79

EXPERIMENT 2

YEAR 1978

REGION - AFRICA
 SITE - ZANZIBAR
 LATITUDE - 6 DEG. S
 COOPERATOR - F.A.O./UNDP RICE AND FOOD CROP PROJECT
 DATE PLANTED - AUGUST 3, 1978
 SOIL TYPE - LOAMY, PH 6.5
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9
 AMOUNT OF MOISTURE - 793 MM

COUNTRY - TANZANIA
 ELEVATION - 30 M
 LONGITUDE - 38 DEG. E
 DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LONGING
14	WILLIAMS	2800.56	22.75	59.00	3.00	3.25	97.50	100.00	110.00	1.50
12	RILLITO	2067.08	23.00	63.00	3.25	3.75	98.75	83.75	136.00	1.25
5	ORBA	1948.31	27.75	71.00	3.25	3.75	98.75	86.25	120.00	1.00
11	KAHALA	1839.12	23.50	61.00	3.25	2.75	97.50	78.75	94.00	1.75
10	IMPROVED PELICAN	1700.34	27.25	73.50	3.50	3.25	87.50	85.00	112.00	1.75
8	CARIBE	1667.00	26.75	62.00	3.00	4.00	98.75	83.75	76.00	2.00
7	TUNIA	1591.98	24.75	84.00	3.25	3.75	100.00	67.50	57.00	1.75
6	IAC-2	1516.97	17.00	83.00	3.00	2.50	97.50	71.25	87.00	2.00
3	SJ-2	1433.62	30.75	71.50	3.50	3.50	100.00	100.00	86.00	2.25
13	BOSSIER	1427.37	25.25	61.00	3.25	3.75	98.75	96.25	88.00	2.00
1	CH-3	1387.78	27.25	97.50	3.00	3.50	98.75	90.00	86.00	2.25
15	RANSOM	933.52	22.25	85.00	2.25	4.00	98.75	90.00	58.00	1.25
9	JUPITER	911.43	32.75	97.50	3.50	4.50	100.00	96.25	100.00	1.75
4	HARDEE LS	833.50	31.00	94.75	3.25	3.25	98.75	86.25	89.00	2.75
2	UFV-1	808.49	26.50	97.50	3.75	4.50	100.00	61.25	94.50	1.75
16	COBB	744.73	22.00	72.50	3.00	2.25	100.00	86.25	94.00	1.00
GRAND MEAN		1475.74	25.66	77.11	3.19	3.52	98.20	85.16	92.97	1.75
STANDARD ERROR OF A VARIETY MEAN		344.48	2.81	10.69	.35	.60	2.12	8.88	.63	.42
COEFFICIENT OF VARIATION		46.69%	21.88%	27.72%	21.87%	34.07%	4.32%	20.86%	1.34%	48.00%
5% LSD VARIETY MEANS (*****=NS)		981.22	8.00	*****	*****	*****	6.04	*****	1.78	*****

CORRELATIONS

(+ - PROBE=.05 +- - PROBE=.01)

YIELD	KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LONGING
YIELD	1.00								
DAYS TO FLOWER	-.19	1.00							
DAYS TO MATURITY	-.48++	.42++	1.00						
NODULE ABUND 1	.07	.07	.07	1.00					
NODULE ABUND 2	-.22	.15	.20	1.00	1.00				
NODULE ACT. 1	-.08	.04	.12	-.23	1.00	1.00			
NODULE ACT. 2	.15	.00	.19	.21	.03	1.00	1.00		
PLANT	.30+	.30+	.30+	.30+	.30+	.30+	.30+	1.00	
LODGING	-.14	.30+	.30+	.30+	.30+	.30+	.30+	.30+	1.00
SHATTER	-.01	.30+	.30+	.30+	.30+	.30+	.30+	.30+	1.00
HARVEST	-.25+	.30+	.30+	.30+	.30+	.30+	.30+	.30+	1.00
PLANTS PER	-.03	.30+	.30+	.30+	.30+	.30+	.30+	.30+	1.00
PODS PER	.21	.30+	.30+	.30+	.30+	.30+	.30+	.30+	1.00
FOOD	.00	.30+	.30+	.30+	.30+	.30+	.30+	.30+	1.00
100 SEED	.00	.30+	.30+	.30+	.30+	.30+	.30+	.30+	1.00
QUALITY	.00	.30+	.30+	.30+	.30+	.30+	.30+	.30+	1.00
OF SEED	.00	.30+	.30+	.30+	.30+	.30+	.30+	.30+	1.00
PERCENT	.00	.30+	.30+	.30+	.30+	.30+	.30+	.30+	1.00
GERM.	.00	.30+	.30+	.30+	.30+	.30+	.30+	.30+	1.00

TABLE 79 EXPERIMENT 2 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
14	WILLIAMS	1.00	227.25	18.33	3.25	.00	.00	.00
12	RILLITO	1.25	153.75	23.95	3.85	.00	.00	.00
5	ORBA	2.25	241.50	25.85	2.93	.00	.00	.00
11	KAHALA	2.75	131.75	21.00	2.88	.00	.00	.00
10	IMPROVED PELICAN	1.25	186.50	24.23	2.75	.00	.00	.00
8	CARIBE	2.50	171.25	21.53	2.85	.00	.00	.00
7	TUNIA	1.75	229.50	24.15	3.05	.00	.00	.00
6	IAC-2	1.50	215.25	15.60	3.00	.00	.00	.00
3	SJ-2	1.25	154.00	16.08	3.50	.00	.00	.00
13	BOSSIER	1.25	212.75	17.38	3.25	.00	.00	.00
1	CH-3	2.50	238.00	19.85	3.30	.00	.00	.00
15	RANSOM	1.25	167.50	16.63	3.18	.00	.00	.00
9	JUFITER	2.00	250.75	26.53	3.28	.00	.00	.00
4	HARDEE LS	1.75	287.75	24.25	3.00	.00	.00	.00
2	UFV-1	1.25	163.25	25.98	3.50	.00	.00	.00
16	COBB	1.75	191.50	22.85	2.35	.00	.00	.00
	GRAND MEAN	1.70	201.39	21.51	3.12	.00	.00	.00
	STANDARD ERROR OF A VARIETY MEAN	.48	29.82	3.06	.32	.00	.00	.00
	COEFFICIENT OF VARIATION	56.44%	29.61%	28.44%	20.44%	.00%	.00%	.00%
	5% LSD VARIETY MEANS (*****=NS)	*****	84.93	*****	*****	.00	.00	.00
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)								
YIELD	KG/HA	-.01	-.25+	-.03	.21	.00	.00	.00
DAYS TO FLOWER		-.04	-.03	.27+	-.02	.00	.00	.00
DAYS TO MATURITY		-.03	.23	.09	-.03	.00	.00	.00
NODULE AROUND 1		.10	.05	.31+	-.02	.00	.00	.00
NODULE AROUND 2		-.06	-.10	.20	.17	.00	.00	.00
NODULE ACT. 1		.11	.08	-.07	.22	.00	.00	.00
NODULE ACT. 2		-.08	.20	.06	-.03	.00	.00	.00
NODULE PLANT		-.07	-.01	.20	.11	.00	.00	.00
LODGING		.16	.13	-.01	.11	.00	.00	.00
SHATTER		1.00	.07	.12	-.00	.00	.00	.00
PLANTS HARVEST		.07	1.00	-.07	-.09	.00	.00	.00
PODS PER PLANT		.12	-.07	1.00	-.18	.00	.00	.00
POD HEIGHT		-.00	-.09	-.18	1.00	.00	.00	.00
100 SEED WEIGHT		.00	.00	.00	.00	1.00	.00	.00
QUALITY OF SEED		.00	.00	.00	.00	.00	1.00	.00
PERCENT GERM.		.00	.00	.00	.00	.00	.00	1.00

TABLE 80 EXPERIMENT 64 YEAR 1978

REGION - AFRICA COUNTRY - UPPER VOLTA
 SITE - VALLEE DU KOU ELEVATION - 450 M
 LATITUDE - 11 DEG. 40 MIN. N LONGITUDE - 4 DEG. 50 MIN. W
 COOPERATOR - C.E.R.C.I.
 DATE PLANTED - MARCH 6, 1979 DATE HARVESTED - JUNE, 1979
 FERTILIZER USED (KG/HA) - N 111.0, P 34.5, K 111.0
 AMOUNT OF MOISTURE - 800 MM
 NUMBER OF IRRIGATIONS - 8 (800 MM)

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
7	TUNIA	3842.43	29.00	105.00	4.00	.00	97.50	.00	61.48	1.50
12	BOSSIER	3400.68	36.00	105.00	4.00	.00	95.00	.00	51.30	1.75
4	HARDEE LS	3334.00	45.00	128.00	3.50	.00	62.50	.00	50.85	1.00
9	JUPITER	2971.43	34.50	115.75	5.00	.00	95.00	.00	54.83	1.50
2	UFV-1	2938.09	34.00	110.75	4.50	.00	85.00	.00	31.80	1.00
10	IMPROVED PELICAN	2858.90	32.75	105.00	4.50	.00	97.50	.00	78.40	1.75
1	CH-3	2804.73	34.00	103.50	5.25	.00	46.25	.00	87.35	2.50
6	IAC-2	2792.22	35.00	110.50	3.75	.00	100.00	.00	89.00	3.00
8	CARIBE	2738.05	33.00	140.00	4.75	.00	100.00	.00	83.25	1.75
13	WILLIAMS	2533.84	26.00	80.00	4.00	.00	81.25	.00	50.55	1.75
5	ORBA	2525.50	34.00	87.00	3.75	.00	80.00	.00	79.13	3.00
11	RILLITO	2504.67	27.50	80.00	3.75	.00	95.00	.00	49.55	2.25
3	SJ-2	1962.89	39.00	97.50	4.50	.00	92.50	.00	51.28	1.50
14	RANSOM	1896.21	25.50	91.00	3.50	.00	93.75	.00	28.85	1.00
15	COBB	1737.85	25.00	96.50	3.75	.00	100.00	.00	29.30	1.00
16	GASOY 17	952.27	25.00	91.00	3.75	.00	97.50	.00	24.70	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		2612.11	32.20	102.91	4.14	.00	88.67	.00	56.35	1.70
COEFFICIENT OF VARIATION		283.37	.86	.43	.57	.00	7.93	.00	4.65	.28
5% LSD VARIETY MEANS (*****=NS)		21.70%	5.33%	.84%	27.38%	.00%	17.88%	.00%	16.51%	32.99%
		807.16	2.45	1.23	*****	.00	22.58	.00	13.25	.80
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.39++	.36++	.07	.00	-.18	.00	.39++	.22
DAYS TO FLOWER		.39++	1.00	.57++	.16	.00	-.28+	.00	.34++	.11
DAYS TO MATURITY		.36++	.57++	1.00	.17	.00	-.02	.00	.31+	-.13
NODULE ABUND 1		.07	.16	.17	1.00	.00	-.22	.00	.22	-.01
NODULE ABUND 2		.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE ACT. 1		-.18	-.28+	-.02	-.22	.00	1.00	.00	-.22	-.19
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANT		.39++	.34++	.31+	.22	.00	-.22	.00	1.00	.63++
LOGGING		.22	.11	-.13	-.01	.00	-.19	.00	.63++	1.00
SHATTER		.00	.00	.00	.00	.00	.00	.00	.00	.00
HARVEST		.15	-.31+	-.12	-.14	.00	-.10	.00	-.06	.06
PLANTS PER		.14	.63++	.41++	.21	.00	-.16	.00	.52++	.27+
PODS PER		.14	.21	.19	-.00	.00	-.01	.00	.64++	.39++
100 SEED		.00	.00	.00	.00	.00	.00	.00	.00	.00
QUALITY		.00	.00	.00	.00	.00	.00	.00	.00	.00
OF SEED		.00	.00	.00	.00	.00	.00	.00	.00	.00
PERCENT		.00	.00	.00	.00	.00	.00	.00	.00	.00
GERM.		.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 80 EXPERIMENT 64 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
7	TUNIA	1.00	102.75	47.50	7.55	.00	.00	.00	46.1	21.3
12	BOSSIER	1.00	136.00	72.25	8.15	.00	.00	.00	46.7	21.9
4	HARDEE LS	1.00	88.50	89.25	6.75	.00	.00	.00	44.6	22.9
9	JUPITER	1.00	113.75	91.75	6.13	.00	.00	.00	44.6	22.8
2	UFV-1	1.00	113.25	46.00	3.75	.00	.00	.00	45.0	21.0
10	IMPROVED PELICAN	1.00	128.75	58.00	11.35	.00	.00	.00	45.1	22.0
1	CH-3	1.00	107.25	118.00	7.83	.00	.00	.00	46.1	20.0
6	IAC-2	1.00	100.00	114.50	10.30	.00	.00	.00	46.7	21.2
8	CARIBE	1.00	109.00	117.50	8.68	.00	.00	.00	46.8	18.3
13	WILLIAMS	1.00	172.75	58.75	5.85	.00	.00	.00	44.3	23.8
5	ORRA	1.00	89.75	62.25	9.15	.00	.00	.00	43.0	21.6
11	RILLITO	1.00	81.00	66.50	5.10	.00	.00	.00	42.9	22.7
3	SJ-2	1.00	52.50	157.25	7.83	.00	.00	.00	43.7	21.3
14	RANSOM	1.00	137.75	36.75	5.70	.00	.00	.00	45.8	24.3
15	COBB	1.00	145.25	27.00	5.55	.00	.00	.00	43.8	21.2
16	GASOY 17	1.00	118.25	20.25	6.78	.00	.00	.00	46.6	21.3
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	.00	.15	.14	.14	.00	.00	.00	.00	.00
DAYS TO FLOWER		.00	-.31+	.63++	.21	.00	.00	.00	.00	.00
DAYS TO MATURITY		.00	-.12	.41++	.19	.00	.00	.00	.00	.00
NODULE ABUND 1		.00	-.14	.21	-.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	-.10	-.16	-.01	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANT	HEIGHT	.00	-.06	.52++	.64++	.00	.00	.00	.00	.00
LONGING		.00	.06	.27+	.39++	.00	.00	.00	.00	.00
SHATTER		1.00	.00	.00	.00	.00	.00	.00	.00	.00
HARVEST		.00	1.00	-.36++	.01	.00	.00	.00	.00	.00
PLANTS PER PLANT		.00	-.36++	1.00	.34++	.00	.00	.00	.00	.00
POD	HEIGHT	.00	.01	.34++	1.00	.00	.00	.00	.00	.00
WEIGHT		.00	.00	.00	.00	1.00	.00	.00	.00	.00
100 SEED	QUALITY OF SEED	.00	.00	.00	.00	.00	1.00	.00	.00	.00
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	1.00	.00	.00

TABLE 81 EXPERIMENT 157 YEAR 1978

REGION - AFRICA
SITE - KAMINA
LATITUDE - 7 DEG. S
COOPERATOR - RONALD MONROE
DATE PLANTED - FEBRUARY 2, 1979
AMOUNT OF MOISTURE - 850 MM

COUNTRY - ZAIRE
ELEVATION - 1000 M
LONGITUDE - 25 DEG. E

DATE HARVESTED - MAY, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEULE ABUND 1	NODEULE ABUND 2	NODEULE ACT. 1	NODEULE ACT. 2	PLANT HEIGHT	LOGGING
3	BOSSIER	2433.82	38.50	101.50	3.75	2.50	95.00	97.50	38.75	1.25
9	DAVIS	2294.21	40.25	105.00	3.75	3.00	97.50	97.50	28.20	1.00
6	COBB	1964.98	39.50	99.00	3.25	2.75	96.25	93.75	22.80	1.00
8	FORREST	1962.89	40.25	100.00	3.75	3.00	88.75	93.75	28.60	1.25
5	RANSOM	1939.97	37.00	104.00	2.75	2.25	97.50	90.00	23.95	1.00
14	MITCHELL	1858.70	36.50	91.00	4.00	3.25	97.50	87.50	27.75	1.00
1	IMPROVED PELICAN	1812.86	41.50	96.25	4.00	3.75	95.00	98.75	37.55	1.25
15	BRAGG	1783.69	37.25	95.25	3.25	2.75	100.00	88.75	26.65	1.75
11	CALLAND	1781.61	34.00	92.75	3.75	3.50	96.25	87.50	26.20	1.50
13	CUTLER 71	1764.94	34.50	90.00	3.25	3.00	95.00	88.75	26.30	1.50
2	RILLITO	1719.09	36.75	92.50	3.00	2.75	96.25	93.75	24.65	1.25
7	JAMES	1706.59	36.75	94.25	3.50	2.75	97.50	90.00	29.00	1.25
4	WILLIAMS	1601.15	34.25	87.50	3.25	2.75	97.50	83.75	21.60	1.75
16	CRAWFORD	1373.19	36.50	89.50	3.00	2.25	93.75	90.00	28.10	1.25
10	GASOY 17	1356.52	36.50	92.75	3.25	3.00	97.50	93.75	20.30	1.00
12	FRANKLIN	1283.59	34.75	90.25	3.75	3.25	97.50	88.75	24.85	1.00
GRAND MEAN		1789.86	37.17	95.09	3.45	2.91	96.17	91.09	27.20	1.25
STANDARD ERROR OF A VARIETY MEAN		165.20	.74	1.20	.25	.27	2.17	3.41	2.13	.21
COEFFICIENT OF VARIATION		18.46%	3.98%	2.53%	14.29%	18.45%	4.51%	7.50%	15.63%	32.93%
5% LSD VARIETY MEANS (*****=NS)		470.57	2.11	3.42	.70	.76	*****	*****	6.05	*****

CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)

YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA
DAYS TO	FLOWER	DAYS TO	FLOWER	DAYS TO	FLOWER	DAYS TO	FLOWER	DAYS TO	FLOWER	DAYS TO	FLOWER
DAYS TO	MATURITY	DAYS TO	MATURITY	DAYS TO	MATURITY	DAYS TO	MATURITY	DAYS TO	MATURITY	DAYS TO	MATURITY
NODEULE	ABUND 1	NODEULE	ABUND 1	NODEULE	ABUND 1	NODEULE	ABUND 1	NODEULE	ABUND 1	NODEULE	ABUND 1
NODEULE	ABUND 2	NODEULE	ABUND 2	NODEULE	ABUND 2	NODEULE	ABUND 2	NODEULE	ABUND 2	NODEULE	ABUND 2
NODEULE	ACT. 1	NODEULE	ACT. 1	NODEULE	ACT. 1	NODEULE	ACT. 1	NODEULE	ACT. 1	NODEULE	ACT. 1
NODEULE	ACT. 2	NODEULE	ACT. 2	NODEULE	ACT. 2	NODEULE	ACT. 2	NODEULE	ACT. 2	NODEULE	ACT. 2
PLANT	HEIGHT	PLANT	HEIGHT	PLANT	HEIGHT	PLANT	HEIGHT	PLANT	HEIGHT	PLANT	HEIGHT
LOGGING		LOGGING		LOGGING		LOGGING		LOGGING		LOGGING	
SHATTER		SHATTER		SHATTER		SHATTER		SHATTER		SHATTER	
HARVEST		HARVEST		HARVEST		HARVEST		HARVEST		HARVEST	
PLANT		PLANT		PLANT		PLANT		PLANT		PLANT	
FODS PER		FODS PER		FODS PER		FODS PER		FODS PER		FODS PER	
100 SEED		100 SEED		100 SEED		100 SEED		100 SEED		100 SEED	
WEIGHT		WEIGHT		WEIGHT		WEIGHT		WEIGHT		WEIGHT	
QUALITY		QUALITY		QUALITY		QUALITY		QUALITY		QUALITY	
OF SEED		OF SEED		OF SEED		OF SEED		OF SEED		OF SEED	
PERCENT		PERCENT		PERCENT		PERCENT		PERCENT		PERCENT	
GERM.		GERM.		GERM.		GERM.		GERM.		GERM.	

TARIF 81	EXPERIMENT 157	YEAR 1978	(CONTINUED)
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ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
3	BOSSIER	1.25	291.25	18.60	7.70	16.20	1.75	94.75	43.4	21.9
9	DAVIS	1.25	319.50	17.10	6.40	18.33	1.25	96.25	42.2	21.3
6	COBB	1.25	299.00	15.85	6.35	16.88	2.00	94.50	41.2	21.7
8	FORREST	1.25	300.25	14.70	7.95	15.30	2.50	93.00	41.2	21.9
5	RANSOM	1.25	306.00	14.00	5.90	17.50	2.75	92.00	41.5	23.7
14	MITCHELL	1.25	307.50	11.10	7.15	19.35	1.75	96.00	38.8	23.8
1	IMPROVED FELICAN	1.50	333.00	18.20	7.95	12.98	1.75	98.00	44.2	20.9
15	BRAGG	2.00	337.25	11.40	7.40	19.35	1.50	98.00	41.9	21.7
11	CALLAND	1.25	309.50	8.80	7.45	20.68	3.50	91.25	42.5	20.7
13	CUTLER 71	1.50	317.50	9.75	8.45	17.25	2.50	95.25	44.3	20.2
2	RILLITO	1.50	258.25	19.90	5.10	16.73	2.50	96.75	42.6	21.9
7	JAMES	1.75	330.00	8.90	8.50	18.88	2.00	96.00	42.0	22.4
4	WILLIAMS	1.25	296.75	14.60	7.55	21.48	2.00	96.00	42.3	22.5
16	CRAWFORD	1.25	245.00	11.30	7.05	18.33	2.00	95.75	43.7	21.1
10	GASDY 17	1.00	285.75	10.70	5.55	16.70	2.25	96.50	41.1	20.4
12	FRANKLIN	2.00	306.25	9.60	8.00	17.55	2.75	95.50	41.4	20.5
<hr/>										
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										

C O R R E L A T I O N S										
(+ - PROB=.05 +- - PROB=.01)										
<hr/>										
YIELD KG/HA										
DAYS TO FLOWER	.27+	.18	.56++	.01	.26+	.21				
DAYS TO MATURITY	.18	.16	.46++	.06	.38++	.34++				
NODULE ABUND 1	.07	.13	.29+	.22	.29+	.24				
NODULE ABUND 2	.13	.26+	.02	.29+	.03	.00				
NODULE ACT. 1	.18	.09	.04	.14	.12	.18				
NODULE ACT. 2	.06	.16	.03	.07	.30+	.26+				
PLANT HEIGHT	.10	.16	.17	.13	.34++	.04				
LOGGING SHATTER	.19	.11	.24	.21	.01	.19				
PLANTS HARVEST	1.00	.04	.17	.04	.00	.00				
PODS PER PLANT	.04	1.00	.06	.09	.10	.10				
POD HEIGHT	.11	.16	.42++	.22	.14	.20				
100 SEED WEIGHT	.01	.06	.03	.03	.04	.08				
QUALITY OF SEED	.09	.19	.04	.04	1.00	.00				
PERCENT GERMINATION	.09	.10	.20	.11	.08	.42++				

TABLE 82 EXPERIMENT 18 YEAR 1978

REGION - AFRICA
 SITE - MWEBE
 LATITUDE - 5 DEG. S
 COOPERATOR - PLANTATIONS LEVER AU ZAIRE
 DATE PLANTED - NOVEMBER 13, 1978
 FERTILIZER USED (KG/HA) - N 75.0, P 33.0, K 60.3
 AMOUNT OF MOISTURE - 725.0 MM

COUNTRY - ZAIRE
 ELEVATION - 550 M

DATE HARVESTED - FEBRUARY, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
9	JUPITER	2221.28	48.00	98.00	.00	.00	.00	.00	42.00	.00
14	RANSOM	1992.06	22.75	92.50	.00	.00	.00	.00	21.50	.00
4	HARDEE LS	1942.05	47.00	98.50	.00	.00	.00	.00	38.50	.00
10	IMPROVED PELICAN	1796.19	37.00	94.25	.00	.00	.00	.00	46.75	.00
7	TUNIA	1750.35	36.25	96.50	.00	.00	.00	.00	37.25	.00
12	BOSSIER	1737.85	62.50	96.75	.00	.00	.00	.00	26.25	.00
2	UFV-1	1625.32	27.75	96.50	.00	.00	.00	.00	17.00	.00
1	CH-3	1581.57	38.00	95.25	.00	.00	.00	.00	53.75	.00
8	CARIBE	1473.21	47.00	94.75	.00	.00	.00	.00	62.25	.00
15	COBB	1404.45	37.50	91.25	.00	.00	.00	.00	22.50	.00
11	RILLITO	1279.42	28.25	62.00	.00	.00	.00	.00	26.75	.00
3	SJ-2	1254.42	37.50	92.00	.00	.00	.00	.00	36.25	.00
16	GASOY 17	1021.04	22.00	91.50	.00	.00	.00	.00	44.25	.00
13	WILLIAMS	762.65	21.00	94.25	.00	.00	.00	.00	24.25	.00
5	ORBA	712.64	31.00	87.25	.00	.00	.00	.00	39.00	.00
6	IAC-2	704.31	36.50	92.50	.00	.00	.00	.00	33.00	.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00								
DAYS TO FLOWER		-.01								
DAYS TO MATURITY		.16								
NODULE ABUND 1		.00								
NODULE ABUND 2		.00								
NODULE ACT. 1		.00								
NODULE ACT. 2		.00								
PLANT HEIGHT		.06								
LODGING		.00								
SHATTER		.00								
HARVEST		.12								
PODS PER PLANT		.28+								
POD HEIGHT		.00								
100 SEED WEIGHT		.23								
QUALITY OF SEED		.05								
PERCENT GERM.		.00								

TABLE 82 EXPERIMENT 18 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
9	JUPITER	.00	120.75	47.43	.00	17.00	2.50	.00
14	RANSOM	.00	181.50	19.18	.00	17.75	3.25	.00
4	HARDEE LS	.00	111.75	45.90	.00	14.75	3.50	.00
10	IMPROVED PELICAN	.00	196.50	32.43	.00	15.75	2.75	.00
7	TUNIA	.00	65.50	36.98	.00	19.75	3.00	.00
12	BOSSIER	.00	91.00	28.00	.00	16.75	3.50	.00
2	UFV-1	.00	127.75	28.23	.00	15.25	2.00	.00
1	CH-3	.00	138.25	38.18	.00	16.50	3.00	.00
8	CARIBE	.00	150.25	43.05	.00	12.50	4.50	.00
15	COBB	.00	206.50	18.30	.00	17.50	1.75	.00
11	RILLITO	.00	140.75	22.08	.00	17.00	3.50	.00
3	SJ-2	.00	120.00	34.98	.00	14.00	2.00	.00
16	GASOY 17	.00	169.75	19.05	.00	18.25	3.00	.00
13	WILLIAMS	.00	155.75	14.45	.00	18.75	3.75	.00
5	ORBA	.00	169.75	33.13	.00	15.75	2.00	.00
6	IAC-2	.00	63.50	34.48	.00	14.50	1.00	.00
	GRAND MEAN	.00	138.08	30.99	.00	16.36	2.81	.00
	STANDARD ERROR OF A VARIETY MEAN	.00	15.55	5.46	.00	.67	.46	.00
	COEFFICIENT OF VARIATION	.00%	22.52%	35.22%	.00%	8.19%	32.73%	.00%
	5% LSD VARIETY MEANS (*****=NS)	.00	44.28	15.54	.00	1.91	1.31	.00
C O R R E L A T I O N S								
			(+ - PROB=.05	++ - PROB=.01)				
YIELD	KG/HA	.00	.12	.28+	.00	.23	.05	.00
DAYS TO	FLOWER	.00	-.30+	.22	.00	-.31+	.10	.00
DAYS TO	MATURITY	.00	-.11	.24	.00	.03	.07	.00
NODULE	ABUND 1	.00	.00	.00	.00	.00	.00	.00
NODULE	ABUND 2	.00	.00	.00	.00	.00	.00	.00
NODULE	ACT. 1	.00	.00	.00	.00	.00	.00	.00
NODULE	ACT. 2	.00	.00	.00	.00	.00	.00	.00
PLANT	HEIGHT	.00	.03	.39+	.00	-.21	.18	.00
	LODGING	.00	.00	.00	.00	.00	.00	.00
	SHATTER	1.00	.00	.00	.00	.00	.00	.00
PLANTS	HARVEST	.00	1.00	-.30+	.00	.12	.00	.00
PODS PER	PLANT	.00	-.30+	1.00	.00	-.23	.11	.00
POD	HEIGHT	.00	.00	.00	1.00	.00	.00	.00
100 SEED	WEIGHT	.00	.12	-.23	.00	1.00	.01	.00
QUALITY	OF SEED	.00	-.00	.11	.00	.01	1.00	.00
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	1.00

TABLE 83 EXPERIMENT 180 YEAR 1978

REGION - AFRICA COUNTRY - ZAMBIA
 SITE - MUFULIRA ELEVATION - 1243 M
 LATITUDE - 12 DEG. 38 MIN. S LONGITUDE - 28 DEG. 10 MIN. E
 COOPERATOR - GLEN MELHUISH DATE HARVESTED - MAY, 1979
 DATE PLANTED - JANUARY 17, 1979 FERTILIZER USED (KG/HA) - N 30.0, P 27.0, K 25.0
 AMOUNT OF MOISTURE - 645 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
8	DAVIS	2638.03	44.00	106.00	.00	.00	.00	.00	42.50	1.00
5	COBB	2592.18	39.00	104.75	.00	.00	.00	.00	40.25	1.00
7	FORREST	2588.02	39.00	99.50	.00	.00	.00	.00	47.00	1.00
15	COLUMBUS	2563.01	32.00	99.00	.00	.00	.00	.00	46.75	1.50
4	RANSOM	2529.67	36.00	102.00	.00	.00	.00	.00	34.25	1.25
6	JAMES	2446.32	32.00	99.50	.00	.00	.00	.00	41.00	2.25
14	BRAGG	2425.48	37.00	100.25	.00	.00	.00	.00	36.25	1.00
9	GASOY 17	2404.65	36.00	98.25	.00	.00	.00	.00	36.50	1.00
1	IMPROVED PELICAN	2342.13	43.75	103.25	.00	.00	.00	.00	58.00	1.50
3	WILLIAMS	2333.80	32.00	93.00	.00	.00	.00	.00	32.00	1.00
16	BOSSIER	2279.62	44.75	103.50	.00	.00	.00	.00	42.75	1.50
2	CRAWFORD	2267.12	34.25	94.00	.00	.00	.00	.00	39.00	1.00
10	CALLAND	2258.78	32.75	100.25	.00	.00	.00	.00	42.00	1.25
12	CUTLER 71	2187.94	36.50	96.25	.00	.00	.00	.00	41.00	1.25
13	MITCHELL	2037.91	33.50	93.50	.00	.00	.00	.00	39.25	1.00
11	FRANKLIN	1612.82	32.00	97.50	.00	.00	.00	.00	38.25	1.00
GRAND MEAN										
2344.22										
STANDARD ERROR OF A VARIETY MEAN										
142.10										
COEFFICIENT OF VARIATION										
12.12%										
5% LSD VARIETY MEANS (*****=NS)										
404.75										
CORRELATIONS										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.18	.40++	.00	.00	.00	.00	.23	.15
DAYS TO FLOWER		.18	1.00	.49++	.00	.00	.00	.00	.29+	-.04
DAYS TO MATURITY		.40++	.49++	1.00	.00	.00	.00	.00	.19	-.00
NODULE ABUND 1		.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	1.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANT		.23	.29+	.19	.00	.00	.00	.00	1.00	.23
LODGING		.15	-.04	-.00	.00	.00	.00	.00	.23	1.00
SHATTER		.00	.00	.00	.00	.00	.00	.00	.00	.00
HARVEST		.08	-.16	-.23	.00	.00	.00	.00	.04	.09
PODS PER PLANT		.40++	.41++	.37++	.00	.00	.00	.00	.30+	-.14
POD HEIGHT		.00	.30+	.21	.00	.00	.00	.00	.32++	.23
100 SEED WEIGHT		.14	-.56++	-.27+	.00	.00	.00	.00	-.37++	-.00
QUALITY OF SEED		.13	.54++	.27+	.00	.00	.00	.00	.17	-.05
PERCENT GERM.		.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 83

EXPERIMENT 180

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
8	DAVIS	.00	271.75	13.68	11.10	19.03	3.00	.00	41.6	20.6
5	COBB	.00	268.00	12.98	9.35	19.18	2.75	.00	41.5	20.4
7	FORREST	.00	274.25	16.00	11.65	16.45	3.25	.00	39.7	20.0
15	COLUMBUS	.00	270.00	8.05	10.35	20.35	2.25	.00	43.8	20.1
4	RANSOM	.00	272.00	12.63	10.65	20.98	3.25	.00	42.2	23.0
6	JAMES	.00	277.00	8.50	11.65	21.50	1.75	.00	42.9	20.6
14	BRAGG	.00	252.25	8.00	11.60	21.33	2.25	.00	42.8	20.3
9	GASOY 17	.00	283.25	11.90	8.45	20.38	2.25	.00	42.6	18.9
1	IMPROVED PELICAN	.00	282.25	12.48	12.40	16.28	3.50	.00	44.8	19.6
3	WILLIAMS	.00	309.50	7.63	10.50	21.38	2.25	.00	43.4	21.5
2	BOSSIER	.00	227.50	12.38	12.15	16.73	3.00	.00	42.4	20.6
16	CRAWFORD	.00	275.75	7.43	9.20	21.58	2.25	.00	43.8	20.7
10	CALLAND	.00	242.75	4.65	11.60	22.83	1.50	.00	44.1	19.3
12	CUTLER 71	.00	255.50	7.28	11.10	22.65	2.50	.00	44.1	20.0
13	MITCHELL	.00	263.25	9.50	9.70	20.08	2.25	.00	40.5	22.5
11	FRANKLIN	.00	226.75	9.00	9.25	19.83	1.25	.00	42.9	19.6
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	.00	.08	.40++	.00	.14	.13	.00	.00	.00
DAYS TO	FLOWER	.00	-.16	.41++	.30+	-.56++	.54++	.00	.00	.00
DAYS TO	MATURITY	.00	-.23	.37++	.21	-.27+	.27+	.00	.00	.00
NODULE	ABUND 1	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE	ABUND 2	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE	ACT. 1	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE	ACT. 2	.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANT	HEIGHT	.00	.04	.30+	.00	.00	.00	.00	.00	.00
LODGING	HEIGHT	.00	.09	.32++	.32++	-.37++	.17	.00	.00	.00
SHATTER	HEIGHT	1.00	.09	-.14	.23	-.00	-.05	.00	.00	.00
HARVEST	PLANT	.00	1.00	-.01	.01	.00	.00	.00	.00	.00
PODS PER	PLANT	.00	-.01	1.00	.09	-.41++	.42++	.00	.00	.00
POD	HEIGHT	.00	.01	.09	1.00	-.18	.36++	.00	.00	.00
100 SEED	WEIGHT	.00	-.11	-.41++	-.18	1.00	-.46++	.00	.00	.00
QUALITY	OF SEED	.00	.22	.42++	.36++	-.46++	1.00	.00	.00	.00
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	1.00	.00	.00

TABLE 84 EXPERIMENT 181 YEAR 1978

REGION - AFRICA COUNTRY - ZAMBIA
 SITE - LUSAKA ELEVATION - 1154 M
 LATITUDE - 15 DEG. 24 MIN. S LONGITUDE - 28 DEG. 19 MIN. E
 COOPERATORS - C.R. NISSLY AND F. JAYAHARI
 DATE PLANTED - JANUARY 5, 1979 DATE HARVESTED - APRIL, 1979
 SOIL TYPE - SAND 29.5%, SILT 56%, CLAY 14.5%, PH 5.5
 FERTILIZER USED (KG/HA) - N 30.0, P 27.0, K 25.0
 AMOUNT OF MOISTURE - 296 MM
 NUMBER OF IRRIGATIONS - 2

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOADING
4	RANSOM	2902.25	40.00	120.00	.00	2.00	.00	85.00	41.75	1.00
16	CRAWFORD	2693.46	33.00	84.00	.00	2.00	.00	38.75	48.00	1.00
15	COLUMBUS	2648.03	38.25	102.00	.00	4.00	.00	17.50	50.50	1.00
13	MITCHELL	2636.36	33.00	98.00	.00	2.00	.00	16.25	47.00	1.00
10	CALLAND	2588.85	26.00	102.00	.00	2.00	.00	26.25	40.50	1.00
8	DAVIS	2564.26	47.00	120.00	.00	1.25	.00	81.25	56.50	1.00
12	CUTLER 71	2455.49	33.00	98.00	.00	2.00	.00	28.75	44.75	1.00
9	GASOY 17	2433.82	35.00	120.00	.00	3.50	.00	81.25	40.50	1.00
5	COBB	2427.15	40.00	120.00	.00	4.00	.00	56.25	48.50	1.00
6	JAMES	2395.06	39.50	117.00	.00	2.00	.00	36.25	54.00	1.00
14	BROGG	2264.20	40.00	110.00	.00	2.00	.00	36.25	45.00	1.00
2	BOSSIER	2230.03	47.00	110.00	.00	2.00	.00	80.00	55.00	1.00
11	FRANKLIN	2122.09	26.00	84.00	.00	2.00	.00	21.25	41.50	1.00
3	WILLIAMS	2072.91	26.00	102.00	.00	2.00	.00	22.50	36.00	1.00
7	FORREST	1874.12	40.00	120.00	.00	2.25	.00	32.50	50.25	1.00
1	IMPROVED PELICAN	1618.24	47.00	110.00	.00	4.00	.00	72.50	80.00	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00								
DAYS TO FLOWER		-.10								
DAYS TO MATURITY		1.00								
NODULE ABUND 1		.63++								
NODULE ABUND 2		.00								
NODULE ACT. 1		.20								
NODULE ACT. 2		.00								
PLANT HEIGHT		.66++								
LOADING		.66++								
SHATTER		.00								
HARVEST		.07								
PODS PER PLANT		-.07								
FOOD HEIGHT		-.18								
100 SEED WEIGHT		-.43++								
QUALITY OF SEED		.53++								
PERCENT GERM.		.10								
YIELD	KG/HA	1.00								
DAYS TO FLOWER		-.10								
DAYS TO MATURITY		1.00								
NODULE ABUND 1		.63++								
NODULE ABUND 2		.00								
NODULE ACT. 1		.20								
NODULE ACT. 2		.00								
PLANT HEIGHT		.66++								
LOADING		.66++								
SHATTER		.00								
HARVEST		.07								
PODS PER PLANT		-.07								
FOOD HEIGHT		-.18								
100 SEED WEIGHT		-.43++								
QUALITY OF SEED		.53++								
PERCENT GERM.		.10								

TABLE 84 EXPERIMENT 181 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
4	RANSOM	2.00	254.50	25.25	8.00	19.65	2.00	.00	42.8	20.1
16	CRAWFORD	2.50	239.50	28.00	9.75	19.35	1.25	.00	42.2	18.8
15	COLUMBUS	2.50	303.25	35.75	12.00	17.50	1.00	.00	44.1	18.5
13	MITCHELL	4.75	262.75	33.00	10.25	17.53	1.25	.00	40.4	20.2
10	CALLAND	4.00	303.75	30.00	11.25	21.83	2.25	.00	43.4	16.7
8	DAVIS	1.75	317.25	33.50	10.00	17.63	1.50	.00	43.5	17.7
12	CUTLER 71	3.25	295.50	30.50	12.50	19.55	1.25	.00	43.0	18.5
9	GASOY 17	2.25	273.25	35.50	9.25	16.68	1.75	.00	40.8	19.2
5	COBB	2.75	317.25	37.00	9.25	16.35	1.25	.00	42.1	18.8
6	JAMES	3.50	310.50	24.25	13.00	18.35	2.00	.00	42.2	18.7
14	BAGG	1.75	288.25	26.00	12.75	18.23	1.50	.00	41.6	18.8
2	BOSSIER	1.50	211.25	30.25	13.00	16.40	1.50	.00	54.2	16.5
11	FRANKLIN	4.75	322.25	23.00	11.25	18.10	1.75	.00	41.7	17.6
3	WILLIAMS	2.50	303.25	26.75	10.50	19.28	1.75	.00	43.4	19.5
7	FORREST	1.75	271.50	38.00	11.75	13.70	1.75	.00	41.4	16.9
1	IMPROVED PELICAN	1.00	290.25	36.50	16.50	12.78	1.00	.00	44.0	17.7
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		2.66	285.27	30.83	11.31	17.68	1.55	.00		
COEFFICIENT OF VARIATION		.00	169.66	18.45	.00	.00	.00	.00		
5% LSD VARIETY MEANS (*****=NS)		.00	118.95% *****	119.67% *****	.00	.00	.00	.00		
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	.07	-.07	-.18	-.43++	.53++	.10	.00		
DAYS TO FLOWER		-.64++	-.20	.34++	.25+	-.58++	-.23	.00		
DAYS TO MATURITY		-.49++	.02	.33++	-.06	-.36++	.15	.00		
NODULE ABUND 1		.00	.00	.00	.00	.00	.00	.00		
NODULE ABUND 2		-.21	.12	.44++	.15	-.46++	-.37++	.00		
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00		
NODULE ACT. 2		-.57++	-.25+	.19	-.11	-.30+	.03	.00		
PLANT HEIGHT		-.47++	-.11	.32++	.49++	-.54++	-.27+	.00		
LODGING		.00	.00	.00	.00	.00	.00	.00		
SHATTER		1.00	.22	-.22	-.18	.35++	.12	.00		
PLANTS HARVEST		.22	1.00	-.11	.03	.12	-.12	.00		
PODS PER PLANT		-.22	-.11	1.00	.02	-.50++	-.23	.00		
POD HEIGHT		-.18	.03	.02	1.00	-.35++	-.23	.00		
100 SEED WEIGHT		.35++	.12	-.50++	-.23	1.00	.29+	.00		
QUALITY OF SEED		.12	-.12	-.22	-.23	.29+	1.00	.00		
PERCENT GERM.		.00	.00	.00	.00	.00	.00	1.00		

TABLE 85

EXPERIMENT 182

YEAR 1978

REGION - AFRICA
 SITE - MAGOYE
 LATITUDE - 16 DEG. 1 MIN. S
 COOPERATOR - F. JAVAHERI
 DATE PLANTED - JANUARY 8, 1979
 FERTILIZER USED (KG/HA) - N 30.0, P 27.0, K 25.0
 AMOUNT OF MOISTURE - 316 MM

COUNTRY - ZAMBIA
 ELEVATION - 1067 M
 LONGITUDE - 27 DEG. 37 MIN. E
 DATE HARVESTED - APRIL, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
7	FORREST	2586.35	32.00	89.25	.00	.00	.00	.00	42.75	1.00
2	BOSSIER	2541.76	40.00	93.25	.00	.00	.00	.00	56.25	2.00
5	COBB	2534.26	32.00	88.00	.00	.00	.00	.00	46.75	1.00
8	DAVIS	2523.09	37.00	91.75	.00	.00	.00	.00	49.50	1.25
13	MITCHELL	2454.66	25.00	80.25	.00	.00	.00	.00	48.00	2.00
4	RANSOM	2447.99	29.00	83.00	.00	.00	.00	.00	29.50	1.00
6	JAMES	2388.39	26.00	80.00	.00	.00	.00	.00	45.50	1.00
16	CRAWFORD	2357.14	25.00	82.25	.00	.00	.00	.00	44.25	1.50
15	COLUMBUS	2309.63	25.00	81.50	.00	.00	.00	.00	43.50	1.00
12	CUTLER 71	2301.71	25.00	79.25	.00	.00	.00	.00	50.00	1.25
14	BAGG	2234.20	29.00	83.00	.00	.00	.00	.00	37.00	1.50
9	GASOY 17	2221.28	26.00	83.00	.00	.00	.00	.00	29.75	1.00
3	WILLIAMS	2166.27	25.00	79.00	.00	.00	.00	.00	40.00	1.00
11	FRANKLIN	2091.67	25.00	79.00	.00	.00	.00	.00	41.75	1.25
10	CALLAND	1983.73	25.00	79.25	.00	.00	.00	.00	41.75	1.50
1	IMPROVED PELICAN	1943.72	48.00	97.00	.00	.00	.00	.00	81.00	1.75
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT										
LODGING										
SHATTER										
HARVEST										
PLANTS PER										
PODS PER										
FOOD										
100 SEED										
WEIGHT										
QUALITY OF SEED										
PERCENT										
GERM.										

TABLE 85 EXPERIMENT 182 YEAR 1973 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
7	FORREST	1.00	205.25	27.25	11.25	17.75	1.00	.00	41.3	19.5
2	BOSSIER	1.00	227.50	22.50	13.25	18.50	1.00	.00	43.0	18.6
5	COBB	1.00	240.25	24.00	9.50	19.00	1.00	.00	39.8	20.5
8	DAVIS	1.00	255.50	24.00	9.50	19.00	1.00	.00	42.2	19.9
13	MITCHELL	1.00	209.75	22.00	9.25	19.50	1.00	.00	38.6	22.1
4	RANSOM	1.00	201.75	20.50	7.00	21.50	1.25	.00	41.3	21.7
6	JAMES	1.00	282.00	16.00	9.50	20.75	1.00	.00	40.9	21.8
16	CRAWFORD	1.00	172.25	27.00	6.25	20.25	1.00	.00	41.4	20.7
15	COLUMBUS	1.00	247.50	23.75	7.00	19.50	1.00	.00	42.7	20.6
12	CUTLER 71	1.00	267.50	22.75	8.25	22.25	1.00	.00	42.1	20.8
14	BAGG	1.00	209.00	20.50	8.50	22.00	1.00	.00	41.1	20.6
9	GASDY 17	1.00	263.75	17.75	7.00	20.25	1.00	.00	40.2	19.4
3	WILLIAMS	1.00	291.00	18.00	8.75	20.25	1.00	.00	39.2	21.6
11	FRANKLIN	1.00	254.75	17.75	6.75	19.75	1.75	.00	39.8	19.9
10	CALLAND	1.00	267.75	16.75	9.75	21.00	1.25	.00	41.3	19.2
1	IMPROVED PELICAN	1.00	270.75	26.50	13.75	15.00	1.00	.00	43.4	19.4
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		1.00	241.64	21.69	9.08	19.77	1.08	.00		
COEFFICIENT OF VARIATION		.00	17.54	1.28	.76	.62	.11	.00		
5% LSD VARIETY MEANS (*****=NS)		.00	14.52%	11.78%	16.69%	6.27%	19.93%	.00%		
			49.97	3.64	2.16	1.76	.31	.00		
C O R R E L A T I O N S										
			(+ - PROB=.05		++ - PROB=.01)					
YIELD	KG/HA	.00	.13	.17	.09	.10	.01	.00		
DAYS TO	FLOWER	.00	.03	.38++	.67++	-.66++	-.17	.00		
DAYS TO	MATURITY	.00	-.10	.50++	.60++	-.66++	-.22	.00		
NODULE	ABUND 1	.00	.00	.00	.00	.00	.00	.00		
NODULE	ABUND 2	.00	.00	.00	.00	.00	.00	.00		
NODULE	ACT. 1	.00	.00	.00	.00	.00	.00	.00		
NODULE	ACT. 2	.00	.00	.00	.00	.00	.00	.00		
PLANT	HEIGHT	.00	.17	.39++	.55++	-.54++	-.15	.00		
	LODGING	.00	-.06	.05	.39++	.33++	.07	.00		
	SHATTER	1.00	.00	.00	.00	.00	.00	.00		
PLANTS	HARVEST	.00	1.00	-.54++	.25+	.06	.05	.00		
PODS PER	PLANT	.00	-.54++	1.00	.04	-.31+	-.22	.00		
POD	HEIGHT	.00	.25+	.04	1.00	-.49++	-.15	.00		
100 SEED	WEIGHT	.00	-.06	-.31+	-.49++	1.00	.07	.00		
QUALITY	OF SEED	.00	.05	-.22	-.15	.09	1.00	.00		
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	1.00		

TABLE 86 EXPERIMENT 178 YEAR 1978

REGION - AFRICA COUNTRY - ZIMBABWE
 SITE - SALISBURY ELEVATION - 1506 M
 LATITUDE - 17 DEG. 48 MIN. S LONGITUDE - 31 DEG. 3 MIN. E
 COOPERATORS - J. R. TATTERSFIELD, J. S. TICHAGWA
 DATE PLANTED - DECEMBER 8, 1978 DATE HARVESTED - APRIL, 1979
 SOIL TYPE - SAND 30%, SILT 20%, CLAY 50%, PH 5.4
 FERTILIZER USED (KG/HA) - N 32.0, P 24.6, K 33.2
 AMOUNT OF MOISTURE - 598 MM
 NUMBER OF IRRIGATIONS - 5 (165 MM)
 LOCAL VARIETIES - ORIBI, IMPALA

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEULE ABUND 1	NODEULE ABUND 2	NODEULE ACT. 1	NODEULE ACT. 2	PLANT HEIGHT	LONGING
14	IMPALA	3974.96	56.00	134.00	3.75	2.75	40.00	36.25	91.00	1.25
5	ORIBI	3937.87	54.50	134.00	4.00	2.50	50.00	45.00	78.00	1.25
9	GASOY 17	3831.60	53.00	131.00	4.00	2.00	57.50	62.50	60.75	1.50
7	FORREST	3803.26	53.00	134.00	4.00	2.75	37.50	50.00	78.50	2.75
4	RANSOM	3623.22	46.00	127.00	4.00	2.50	45.00	57.50	53.75	1.00
13	MITCHELL	3518.62	36.00	113.00	4.00	2.25	35.00	30.00	60.75	1.00
2	BOSSIER	3459.02	60.00	149.75	4.00	2.50	43.75	37.50	77.75	5.00
8	DAVIS	3416.93	60.00	138.75	4.00	2.50	66.25	68.75	85.50	2.75
15	COLUMBUS	3198.56	39.00	123.75	4.00	2.25	58.75	57.50	57.75	1.00
16	CRAWFORD	3186.89	39.00	118.50	4.00	2.25	45.00	62.50	64.00	1.00
12	CUTLER 71	2966.84	36.00	113.00	4.00	2.00	56.25	51.25	56.25	1.00
10	CALLAND	2945.59	33.00	123.00	3.75	2.00	63.75	67.50	51.00	1.25
6	JAMES	2938.09	41.00	125.00	4.00	2.00	67.50	62.50	54.00	1.00
3	WILLIAMS	2487.58	36.00	110.00	4.00	2.00	36.25	26.25	44.00	1.00
11	FRANKLIN	2284.21	36.00	106.00	4.00	2.00	46.25	37.50	48.50	1.00
1	IMPROVED PELICAN	2276.29	78.00	163.00	4.00	2.75	42.50	70.00	133.00	4.25
CORRELATIONS										
GRAND MEAN					3.97	2.31	49.45	51.41	68.41	1.75
STANDARD ERROR OF A VARIETY MEAN					1.67	.23	7.46	6.38	2.99	.25
COEFFICIENT OF VARIATION					2.62%	19.47%	30.17%	24.84%	8.74%	28.41%
5% LSD VARIETY MEANS (*****=NS)					4.77 *****	*****	21.25	18.18	8.51	.71
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.17	.18	-.11	.19	.02	-.09	.09	-.02
DAYS TO FLOWER		.17	1.00	.92++	.04	.45++	-.08	.21	.89++	.74++
DAYS TO MATURITY		.18	.92++	1.00	-.02	.44++	.01	.31+	.84++	.78++
NODEULE ABUND 1		-.11	.04	-.02	1.00	-.07	-.23	-.01	-.03	.10
NODEULE ABUND 2		.19	.45++	.44++	-.07	1.00	-.17	-.02	.44++	.29+
NODEULE ACT. 1		.02	-.08	.01	-.23	-.17	1.00	.25+	-.05	-.04
NODEULE ACT. 2		-.09	.21	.31+	-.01	-.02	.25+	1.00	.19	.14
PLANT HEIGHT		.09	.89++	.84++	-.03	.44++	-.05	.19	1.00	.67++
LOGGING		-.02	.74++	.78++	.10	.29+	-.04	.14	.67++	1.00
SHATTER		-.29+	.29+	.38++	.09	-.00	.13	.32++	.29+	.28+
HARVEST		.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS PER		.08	.92++	.86++	.08	.40++	-.02	.20	.89++	.79++
PODS PER		.38++	.79++	.72++	-.06	.49++	-.04	.05	.76++	.48++
100 SEED WEIGHT		.19	-.69++	-.61++	-.30+	-.30+	.21	-.03	-.64++	-.68++
QUALITY OF SEED		-.30+	-.23	-.09	-.23	-.12	-.02	-.23	-.13	.08
PERCENT GERM.		-.00	-.36++	-.38++	-.02	-.10	.02	.02	-.30+	-.54++

TABLE 86 EXPERIMENT 178 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
14	IMPALA	1.00	200.00	32.03	10.00	22.78	3.00	93.75	39.1	17.8
5	ORIBI	1.00	200.00	29.50	11.25	22.25	2.50	90.25	41.7	16.9
9	GASOY 17	1.25	200.00	32.20	2.50	20.03	2.00	96.00	42.0	17.1
7	FORREST	1.00	200.00	37.03	5.00	19.00	3.00	93.75	41.8	15.6
4	RANSOM	1.00	200.00	27.05	5.00	21.25	3.00	91.00	43.0	19.6
13	MITCHELL	1.00	200.00	24.38	.00	20.35	3.00	94.50	40.2	19.6
2	BOSSIER	1.25	200.00	39.68	6.25	18.58	3.50	84.50	43.2	16.4
8	DAVIS	1.25	200.00	38.18	6.25	19.53	2.00	90.75	43.0	18.4
15	COLUMBUS	1.25	200.00	24.75	.00	20.35	3.00	96.00	45.5	17.9
16	CRAWFORD	1.00	200.00	22.23	.00	21.88	2.75	97.00	45.1	15.4
12	CUTLER 71	1.00	200.00	21.18	.00	23.23	3.00	90.00	44.8	17.4
10	CALLAND	1.75	200.00	21.30	.00	24.20	3.50	91.75	44.4	15.7
6	JAMES	1.50	200.00	20.78	2.50	22.23	3.00	95.25	45.5	18.1
3	WILLIAMS	1.00	200.00	17.93	.00	21.43	3.00	91.00	43.3	18.5
11	FRANKLIN	1.00	200.00	21.50	.00	20.25	3.00	95.25	41.3	16.2
1	IMPROVED PELICAN	2.00	200.00	59.55	10.00	14.78	3.00	88.00	44.7	13.6
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		1.20	200.00	29.33	3.67	20.75	2.89	92.42		
COEFFICIENT OF VARIATION		.16	.00	1.64	.87	.39	.14	1.73		
5% LSD VARIETY MEANS (*****=NS)		26.51%	.00%	11.15%	47.40%	3.79%	9.41%	3.75%		
		.45	.00	4.66	2.48	1.12	.39	4.93		
C O R R E L A T I O N S (+ - PROB=.05) ++ - PROB=.01										
YIELD	KG/HA	-.29+	.00	.08	.38++	.19	-.30+	-.00		
DAYS TO FLOWER		.29+	.00	.92++	.79++	-.69++	-.23	-.36++		
DAYS TO MATURITY		.38++	.00	.86++	.72++	-.61++	-.09	-.38++		
NODULE ABUND 1		.09	.00	.08	-.06	-.30+	-.23	-.02		
NODULE ABUND 2		-.00	.00	.40++	.49++	-.30+	-.12	-.10		
NODULE ACT. 1		.13	.00	-.02	-.04	.21	-.02	.02		
NODULE ACT. 2		.32++	.00	.20	.05	-.03	-.23	.02		
PLANT HEIGHT		.29+	.00	.89++	.76++	-.64++	-.13	-.30+		
LODGING		.28+	.00	.79++	.48++	-.68++	.08	-.54++		
SHATTER		1.00	.00	.35++	.02	-.31+	.12	-.18		
HARVEST		.00	1.00	.00	.00	.00	.00	.00		
PLANTS PER		.35++	.00	1.00	.66++	-.76++	-.10	-.37++		
POD		.02	.00	.66++	1.00	-.31+	-.19	-.35++		
100 SEED WEIGHT		-.31+	.00	-.76++	-.31+	1.00	.08	.21		
QUALITY OF SEED		.12	.00	-.10	-.19	.08	1.00	-.18		
PERCENT GERM.		-.18	.00	-.37++	-.35++	.21	-.18	1.00		

TABLE 87

EXPERIMENT 150

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
7	JAMES	1.00	211.25	12.25	4.63	14.30	1.25	70.00
11	CALLAND	1.00	225.50	11.75	4.38	13.13	1.25	92.50
14	MITCHELL	1.00	200.25	14.25	4.15	13.40	1.25	77.50
13	CUTLER 71	1.00	213.50	12.75	4.38	13.20	1.00	82.50
4	WILLIAMS	1.00	209.00	11.75	4.30	13.48	1.50	82.50
15	BRAGG	1.00	216.00	9.50	5.03	14.00	1.50	76.25
3	BOSSIER	3.00	226.25	19.00	4.13	13.13	2.50	83.75
6	COBB	1.00	228.00	14.25	3.73	14.00	1.25	88.75
5	RANSOM	1.00	241.25	12.00	4.48	13.10	1.25	77.50
9	DAVIS	2.00	224.00	11.00	4.60	13.10	1.75	72.50
16	CRAWFORD	1.00	171.25	14.00	4.63	14.10	1.50	87.50
10	GASOY 17	1.00	225.00	11.00	4.58	14.15	1.50	91.25
12	FRANKLIN	1.00	188.50	11.25	4.08	14.50	1.25	87.50
2	RILLITO	1.00	178.75	18.50	4.70	13.23	1.00	92.50
1	IMPROVED PELICAN	2.00	213.00	15.50	4.95	12.80	2.00	72.50
8	FORREST	1.00	220.00	11.50	4.83	13.13	1.75	85.00
	GRAND MEAN	1.25	211.97	13.14	4.47	13.55	1.47	82.50
	STANDARD ERROR OF A VARIETY MEAN	.14	9.69	1.60	.09	.13	.29	3.42
	COEFFICIENT OF VARIATION	22.71%	9.14%	24.30%	4.06%	1.88%	38.90%	8.30%
	5% LSD VARIETY MEANS (*****=NS)	.40	27.60	4.55	.26	.36	*****	9.75

C O R R E L A T I O N S		(+ - PROB=.05)	(+ - PROB=.01)
YIELD	KG/HA	.13	
DAYS TO	FLOWER	.20	
DAYS TO	MATURITY	.53++	
NODULE	ABUND 1	-.11	
NODULE	ABUND 2	-.02	
NODULE	ACT. 1	-.03	
NODULE	ACT. 2	-.09	
PLANT	HEIGHT	.55++	
LODGING	HEIGHT	-.14	
SHATTER	SHATTER	1.00	
HARVEST	HARVEST	.25+	
PODS PER	PLANT	.26+	
POD	HEIGHT	-.03	
100 SEED	WEIGHT	-.37++	
QUALITY	OF SEED	.44++	
PERCENT	GERM.	-.25+	

TABLE 88 EXPERIMENT 141 YEAR 1978

REGION - ASIA
 SITE - MYMENSINGH
 LATITUDE - 24 DEG. 7 MIN. N
 COOPERATORS - DR. A.J. MIAH, JAFAR AHMED, B.H. SIKDER.
 DATE PLANTED - AUGUST 29, 1978
 SOIL TYPE - SAND 10.0%, SILT 65.6%, CLAY 24.4%
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 SUBSTITUTION VARIETY - LEE-74

COUNTRY - BANGLADESH

ELEVATION - 18 M

LONGITUDE - 90 DEG. 4 MIN. E

DATE HARVESTED - NOVEMBER, 1978

CLAY 24.4%

N 25.0, P 25.0, K 25.0

LEE-74

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEULE ABUND 1	NODEULE ABUND 2	NODEULE ACT. 1	NODEULE ACT. 2	PLANT HEIGHT	LODGING
1	IMPROVED PELICAN	2605.94	33.75	98.25	14.50	21.00	90.00	98.75	62.20	3.00
3	BOSSIER	2604.69	30.00	106.00	23.00	24.25	80.00	88.75	43.93	1.00
15	BRAGG	2573.43	28.00	96.00	17.75	24.00	92.50	97.50	30.23	1.00
2	RILLITO	2508.83	28.75	96.00	20.00	27.50	98.75	100.00	37.60	2.00
7	JAMES	1958.72	27.25	93.00	16.00	17.00	87.50	95.00	37.45	1.00
5	RANSOM	1906.63	28.50	100.50	21.75	27.25	93.75	98.75	24.63	1.00
14	MITCHELL	1819.11	26.50	90.00	16.00	17.25	97.50	100.00	35.10	1.00
6	LEE-74	1819.11	27.00	92.00	22.75	19.50	97.50	100.00	29.13	1.00
11	CALLAND	1654.50	25.00	91.00	15.75	18.50	96.25	98.75	33.20	1.00
10	GASOY 17	1641.99	27.50	95.25	13.00	20.75	93.75	97.50	24.10	1.00
9	DAVIS	1635.74	31.00	96.00	15.75	18.25	95.00	97.50	23.78	1.00
8	FORREST	1583.65	28.50	92.00	14.50	20.00	92.50	97.50	26.50	1.00
4	WILLIAMS	1556.56	26.50	88.00	24.25	26.00	91.25	96.25	33.10	1.00
13	CUTLER 71	1454.46	26.00	87.75	18.75	19.00	97.50	100.00	32.08	1.00
12	FRANKLIN	1362.77	25.25	85.00	16.50	12.00	90.00	96.25	26.73	1.00
16	CRAWFORD	1277.34	26.50	90.25	20.50	22.50	92.50	97.50	27.33	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.41++	.59++	.04	.07	-.11	-.15	.54++	.44++
DAYS TO	FLOWER	.41++	1.00	.65++	-.07	.10	-.14	-.01	.44++	.62++
DAYS TO	MATURITY	.59++	.65++	1.00	.11	.32++	-.23	-.21	.32++	.27++
NODEULE	ABUND 1	.04	-.07	.11	1.00	.05	.05	.04	-.09	-.12
NODEULE	ABUND 2	.07	.10	.32++	.10	1.00	.11	.06	.02	.13
NODEULE	ACT. 1	-.11	-.14	-.23	.05	.11	1.00	.88++	-.23	.00
NODEULE	ACT. 2	-.15	-.01	-.21	.04	.06	.88++	1.00	-.17	.10
PLANT	HEIGHT	.54++	.44++	.32+	-.09	.02	-.23	-.17	1.00	.76++
LODGING		.44++	.62++	.27+	-.12	.13	.00	.10	.00	1.00
SHATTER		.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS	HARVEST	.43++	.09	.12	-.01	-.09	.03	.03	.28+	.13
PODS PER	PLANT	.62++	.61++	.63++	.01	.17	-.15	-.12	.57++	.54++
POD	HEIGHT	.16	.22	-.02	-.13	-.14	-.18	-.12	.43++	.43++
100 SEED	WEIGHT	-.11	-.07	.02	.05	.01	-.05	-.02	.18	-.07
QUALITY	OF SEED	.00	.00	.00	.00	.00	.00	.00	.00	.00
PERCENT	GERM.	.19	.24	.22	.23	.19	-.10	-.03	.29+	.33++

TABLE 88

EXPERIMENT 141

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
1	IMPROVED PELICAN	1.00	266.00	33.25	11.88	15.40	2.00	98.50	45.0	21.7
3	BOSSIER	1.00	210.25	34.25	6.68	15.38	2.00	97.25	45.3	21.4
15	BRAGG	1.00	261.75	24.25	6.38	14.65	2.00	93.50	43.1	23.2
2	RILLITO	1.00	198.75	30.50	5.30	13.20	2.00	92.50	43.5	22.8
7	JAMES	1.00	253.00	17.00	6.85	15.18	2.00	85.50	42.4	23.9
5	RANSOM	1.00	246.00	14.75	6.05	15.88	2.00	92.75	43.4	24.6
14	MITCHELL	1.00	222.75	17.00	7.65	15.48	2.00	84.50	41.3	24.3
6	LEE-74	1.00	249.75	22.50	5.88	13.38	2.00	97.50	45.0	22.8
11	CALLAND	1.00	257.00	15.25	6.50	15.15	2.00	91.00	42.9	21.6
10	GASDY 17	1.00	237.50	22.25	5.43	14.95	2.00	92.00	42.0	22.4
9	DAVIS	1.00	228.75	20.00	7.08	14.38	2.00	86.75	43.6	22.7
8	FORREST	1.00	198.50	26.25	5.65	13.28	2.00	95.50	42.5	23.0
4	WILLIAMS	1.00	246.50	16.75	7.43	15.05	2.00	95.50	43.5	23.7
13	CUTLER 71	1.00	229.50	14.00	8.95	17.33	2.00	92.50	43.3	22.7
12	FRANKLIN	1.00	200.00	12.25	7.15	14.23	2.00	94.50	41.9	23.8
16	CRAMFORD	1.00	113.50	16.75	5.73	14.90	2.00	89.25	44.2	22.8
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS										
YIELD KG/HA										
DAYS TO FLOWERING										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
NODULE PLANT										
LODGING										
SHATTER										
HARVEST										
PLANTS PER										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										
YIELD										
DAYS TO FLOWERING										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
NODULE PLANT										
LODGING										
SHATTER										
HARVEST										
PLANTS PER										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 89

EXPERIMENT 170

YEAR 1978

REGION - ASIA
 SITE - SHANHUA
 LATITUDE - 23 DEG. 7 MIN. N
 COOPERATOR - S. SHANMUGASUNDARAM
 DATE PLANTED - JULY 12, 1978
 FERTILIZER USED (KG/HA) - N 40.0, P 44.0, K 99.6
 AMOUNT OF MOISTURE - 868 MM
 LOCAL VARIETIES - SHIH SHIH, TAINUNG NO. 4

COUNTRY - REPUBLIC OF CHINA, TAIWAN
 ELEVATION - 9 M
 LONGITUDE - 120 DEG. 17 MIN. E
 DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
9	DAVIS	2479.50	32.50	100.50	.00	.00	.00	.00	52.45	1.50
15	TAINUNG #4	2468.00	32.50	94.50	.00	.00	.00	.00	50.80	2.50
4	WILLIAMS	2426.50	22.50	85.00	.00	.00	.00	.00	69.18	1.75
5	RANSOM	2422.50	29.00	94.50	.00	.00	.00	.00	50.78	1.50
12	FRANKLIN	2390.00	22.75	84.50	.00	.00	.00	.00	63.75	2.75
3	BOSSIER	2320.50	39.00	103.50	.00	.00	.00	.00	59.95	2.00
7	JAMES	2276.00	24.75	94.00	.00	.00	.00	.00	69.75	1.50
1	IMPROVED PELICAN	2232.00	42.00	103.50	.00	.00	.00	.00	95.20	2.00
6	SHIH SHIH	2178.00	26.50	86.75	.00	.00	.00	.00	40.45	1.75
10	GASOY 17	2087.50	28.00	96.25	.00	.00	.00	.00	44.50	1.25
2	RILLITO	2057.50	32.00	96.50	.00	.00	.00	.00	69.05	1.25
8	FORREST	1762.50	29.25	92.25	.00	.00	.00	.00	43.83	1.50
11	CALLAND	1729.50	22.25	86.50	.00	.00	.00	.00	61.95	1.50
14	MITCHELL	1703.00	23.75	86.50	.00	.00	.00	.00	55.08	1.75
16	CRAWFORD	1545.00	24.25	86.75	.00	.00	.00	.00	48.33	2.00
13	CUTLER 71	1505.50	22.75	85.50	.00	.00	.00	.00	55.53	2.00
GRAND MEAN		2098.97	28.36	92.31	.00	.00	.00	.00	58.16	1.78
STANDARD ERROR OF A VARIETY MEAN		328.21	.43	1.15	.00	.00	.00	.00	5.62	.35
COEFFICIENT OF VARIATION		31.27%	3.02%	2.50%	.00%	.00%	.00%	.00%	19.33%	38.75%
5% LSD VARIETY MEANS (*****=NS)		*****	1.22	3.29	.00	.00	.00	.00	16.01	*****

(+ - PROB=.05 ++ - PROB=.01)

C O R R E L A T I O N S

YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA
DAYS TO FLOWER	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16
DAYS TO MATURITY	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18
NODULE ABUND 1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANT HEIGHT	.41++	.41++	.41++	.41++	.41++	.41++	.41++	.41++	.41++	.41++
LODGING	.29+	.29+	.29+	.29+	.29+	.29+	.29+	.29+	.29+	.29+
SHATTER	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS HARVESTED	.43++	.43++	.43++	.43++	.43++	.43++	.43++	.43++	.43++	.43++
PODS PER PLANT	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18
POD HEIGHT	.36++	.36++	.36++	.36++	.36++	.36++	.36++	.36++	.36++	.36++
100 SEED WEIGHT	-.05	-.05	-.05	-.05	-.05	-.05	-.05	-.05	-.05	-.05
QUALITY OF SEED	-.25+	-.25+	-.25+	-.25+	-.25+	-.25+	-.25+	-.25+	-.25+	-.25+
PERCENT GERM.	-.02	-.02	-.02	-.02	-.02	-.02	-.02	-.02	-.02	-.02

TABLE 89

EXPERIMENT 170

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
9	DAVIS	1.00	138.00	49.68	12.95	15.60	1.75	47.75
15	TAINUNG #4	1.00	65.00	60.20	13.48	16.75	2.25	57.75
4	WILLIAMS	1.00	163.50	23.15	13.40	18.33	3.50	70.25
5	RANSOM	1.00	122.50	38.28	13.20	15.45	2.00	85.00
12	FRANKLIN	1.00	209.00	20.43	12.78	16.98	3.75	45.75
3	BOSSIER	1.00	110.50	50.13	14.00	13.70	2.00	63.50
7	JAMES	1.00	186.75	28.75	13.55	16.48	2.75	82.75
1	IMPROVED PELICAN	1.00	124.25	57.60	15.00	11.25	2.00	97.50
6	SHIH SHIH	1.00	121.25	35.48	11.60	15.15	2.00	68.75
10	GASOY 17	1.00	126.50	44.28	12.63	14.13	1.75	84.75
2	RILLITO	1.00	119.25	56.05	12.88	13.43	2.50	91.00
8	FORREST	1.00	119.00	43.35	13.10	12.55	2.00	62.75
11	CALLAND	1.00	186.50	17.23	12.68	18.70	4.50	44.25
14	MITCHELL	1.00	110.75	30.85	12.08	16.80	3.75	50.50
16	CRAWFORD	1.00	92.25	29.03	12.18	16.35	2.75	68.25
13	CUTLER 71	1.00	156.25	18.30	12.33	18.55	4.00	60.75
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN								
COEFFICIENT OF VARIATION								
5% LSD VARIETY MEANS (*****=NS)								
C O R R E L A T I O N S								
(+ - PROB=.05 ++ - PROB=.01)								
YIELD	KG/HA	.00	.43++	.18	.36++	-.05	-.25+	-.02
DAYS TO FLOWER		.00	-.41++	.76++	.48++	-.76++	-.62++	.24
DAYS TO MATURITY		.00	-.33++	.76++	.43++	-.70++	-.65++	.28+
NODULE ABUND 1		.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00
PLANT	HEIGHT	.00	.45++	.03	.56++	-.10	.14	.17
LOGGING		.00	.17	-.14	.17	.09	.17	-.21
SHATTER		1.00	.00	.00	.00	.00	.00	.00
PLANTS	HARVEST	.00	1.00	-.51++	.17	.35++	.36++	-.21
PODS PER	PLANT	.00	-.51++	1.00	.22	-.67++	-.66++	.30+
POD	HEIGHT	.00	.17	.22	1.00	.27+	-.16	.06
100 SEED	WEIGHT	.00	.35++	-.67++	-.27+	1.00	.68++	-.35++
QUALITY	OF SEED	.00	.36++	-.66++	-.16	.68++	1.00	-.31+
PERCENT	GERM.	.00	-.21	.30+	.06	-.35++	-.31+	1.00

TABLE 90 EXPERIMENT 136 YEAR 1978

REGION - ASIA
 SITE - HISSAR
 LATITUDE - 29 DEG. 10 MIN. N
 COOPERATOR - DR. B.D. CHAUDHARY
 DATE PLANTED - JULY 7, 1978
 FERTILIZER USED (KG/HA) - N 20.0, P 80.0, K 60.0
 AMOUNT OF MOISTURE - 410 MM
 NUMBER OF IRRIGATIONS - 2

COUNTRY - INDIA
 ELEVATION - 215 M
 LONGITUDE - 75 DEG. 46 MIN. E
 DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LONGING
5	RANSOM	3222.04	49.50	112.75	2.25	.00	95.00	.00	35.08	1.00
13	BAGG	2425.18	47.25	114.00	1.75	.00	100.00	.00	39.10	1.00
6	CORB	2210.37	51.75	113.25	4.00	.00	97.50	.00	37.03	1.00
9	DAVIS	2149.88	51.75	116.00	1.50	.00	96.25	.00	32.20	1.25
2	RILLITO	2131.98	49.50	110.50	1.25	.00	97.50	.00	64.88	1.00
3	BOSSIER	1968.41	57.75	113.25	3.50	.00	97.50	.00	40.20	1.00
4	WILLIAMS	1862.24	40.00	97.75	1.75	.00	90.00	.00	42.70	1.00
7	JAMES	1601.76	42.00	104.00	1.75	.00	95.00	.00	38.65	1.00
10	CALLAND	1381.41	38.00	96.75	1.50	.00	92.50	.00	46.48	1.00
11	FRANKLIN	1333.26	39.00	94.25	2.50	.00	95.75	.00	35.78	1.00
12	CUTLER 71	1242.52	39.50	95.00	1.00	.00	93.75	.00	41.83	1.00
8	FORREST	1231.41	43.50	113.50	3.75	.00	98.75	.00	25.48	1.00
1	KAHALA	959.21	43.25	96.25	2.25	.00	87.50	.00	39.78	1.00
GRAND MEAN										
1824.59										
STANDARD ERROR OF A VARIETY MEAN										
95.54										
COEFFICIENT OF VARIATION										
10.47%										
5% LSD VARIETY MEANS (*****=NS)										
274.04										
CORRELATIONS										
(+ - PROBE=.05 ++ - PROBE=.01)										
YIELD	KG/HA	1.00	.57++	.64++	.02	.00	.22	.00	.07	.11
DAYS TO FLOWER	1.00	.57++	1.00	.81++	.36++	.00	.29+	.00	.01	.15
DAYS TO MATURITY	.64++	.81++	1.00	1.00	.35+	.00	.45++	.00	.18	.17
NODULE ABUND 1	.02	.36++	.35+	1.00	1.00	.00	.21	.00	-.40++	-.03
NODULE ABUND 2	.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE ACT. 1	.22	.29+	.45++	.21	.00	.00	1.00	.00	-.13	.12
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANT HEIGHT	.07	.01	.18	-.40++	.00	.00	-.13	.00	1.00	-.09
LODGING	.11	.15	.17	.03	.12	.00	.00	.00	-.09	1.00
SHATTER	-.20	-.15	-.26	-.26	.00	.00	.01	.00	-.13	.21
HARVEST	.19	-.28+	-.19	-.27	.00	.00	.01	.00	.22	-.13
PLANTS PER	.66++	.77++	.74++	.05	.00	.00	.29+	.00	.09	.27+
PODS PER	.34+	.52++	.44++	.00	.00	.00	-.04	.00	.14	.12
100 SEED	.01	-.28+	-.37++	-.36++	.00	.00	-.49++	.00	-.15	.18
WEIGHT	.01	.09	.01	-.31+	.00	.00	.03	.00	.11	.12
QUALITY OF SEED	.01	.09	.01	-.31+	.00	.00	.03	.00	.11	.12
PERCENT GERM.	.46++	.29+	.38++	.17	.00	.00	.16	.00	.14	-.05

TABLE 90

EXPERIMENT 136

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
5	RANSOM	1.00	44.75	88.60	5.85	16.20	1.00	97.25
13	BRAGG	1.00	52.75	99.07	6.03	11.98	1.75	95.75
6	COBB	1.00	33.00	70.30	6.68	10.55	1.25	95.75
9	DAVIS	2.00	31.25	88.85	6.63	15.03	2.00	84.75
2	RILLITO	1.00	42.75	108.35	6.03	10.73	1.75	94.75
3	ROSSIER	1.25	39.50	105.10	6.03	13.00	1.50	92.25
4	WILLIAMS	1.00	49.25	50.40	4.63	14.93	1.75	87.00
7	JAMES	1.00	31.75	83.00	6.70	14.53	1.00	95.75
10	CALLAND	1.25	45.75	37.95	5.85	14.98	1.25	88.50
11	FRANKLIN	1.75	42.75	40.18	3.93	12.93	1.25	92.00
12	CUTLER 71	2.25	48.25	45.15	4.53	14.38	2.00	82.25
8	FORREST	1.00	40.00	53.08	4.45	11.33	1.25	86.75
1	KAHALA	1.00	32.25	41.45	6.38	15.38	1.25	81.00
GRAND MEAN		1.27	41.08	70.11	5.67	13.53	1.46	90.29
STANDARD ERROR OF A VARIETY MEAN		.13	1.58	4.98	.23	.46	.31	2.46
COEFFICIENT OF VARIATION		19.95%	7.68%	14.20%	8.11%	6.81%	42.79%	5.46%
5% LSD VARIETY MEANS (*****=NS)		.36	4.52	14.27	.66	1.32	*****	7.06
C O R R E L A T I O N S								
				(+ - PROB=.05		++ - PROB=.01)		
YIELD	KG/HA	-.20	.19	.66++	.34+	.01	.01	.46++
DAYS TO FLOWER		-.15	-.28+	.77++	.52++	-.28+	.09	.29+
DAYS TO MATURITY		-.26	-.19	.74++	.44++	-.37++	.01	.38++
NODULE ABUND 1		-.26	-.27	.05	.00	-.36++	-.31+	.17
NODULE ABUND 2		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.01	.01	.29+	-.04	-.49++	.03	.16
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00
PLANT	HEIGHT	-.13	.22	.27+	.14	-.15	.11	.14
LODGING		.21	-.13	.09	.12	.18	.12	-.05
SHATTER		1.00	.10	-.22	-.24	.19	.28+	-.44++
HARVEST		.10	1.00	-.06	-.46++	-.02	.11	.01
PLANTS	PER PLANT	-.22	-.06	1.00	.46++	-.25	.07	.49++
PODS PER	POD	-.24	-.46++	.46++	1.00	.06	-.02	.20
100 SEED	WEIGHT	.19	-.02	-.25	.06	1.00	-.06	-.14
QUALITY	OF SEED	.28+	.11	.07	-.02	-.06	1.00	-.30+
PERCENT	GERM.	-.44++	.01	.49++	.20	-.14	-.30+	1.00

TABLE 91 EXPERIMENT 7 YEAR 1978

REGION - ASIA
 SITE - BOGOR
 COOPERATOR - A. DIMYATI
 DATE PLANTED - MAY 16, 1978
 SOIL TYPE - BROWN LATOSOL, PH 5.8
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 1157 MM
 NUMBER OF IRRIGATIONS - 2
 LOCAL VARIETIES - B/1667, 1682

COUNTRY - INDONESIA
 ELEVATION - 270 M
 LONGITUDE - 107 DEG. E
 DATE HARVESTED - AUGUST, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
15	B/1667	842.67	31.00	81.00	.00	.00	.00	.00	60.35	2.75
1	CH-3	737.65	31.00	88.25	.00	.00	.00	.00	72.88	2.75
14	WILLIAMS	733.06	24.75	81.00	.00	.00	.00	.00	55.95	1.00
12	RILLITO	703.22	28.00	82.50	.00	.00	.00	.00	60.85	2.25
5	ORBA	660.13	30.75	81.00	.00	.00	.00	.00	61.50	2.50
3	SJ-2	639.71	32.50	82.50	.00	.00	.00	.00	57.40	1.75
11	KAHALA	601.79	28.25	81.00	.00	.00	.00	.00	50.53	1.00
7	TUNIA	579.28	28.75	84.00	.00	.00	.00	.00	55.43	1.25
10	IMPROVED PELICAN	557.61	32.75	84.00	.00	.00	.00	.00	69.83	1.75
16	1682	503.43	35.25	86.25	.00	.00	.00	.00	85.57	3.25
4	HARDEE LS	499.27	33.50	89.00	.00	.00	.00	.00	51.73	1.50
6	IAC-2	371.32	33.50	85.00	.00	.00	.00	.00	68.13	1.75
2	UFV-1	270.05	30.50	84.00	.00	.00	.00	.00	32.08	1.00
13	BOSSIER	265.05	32.25	84.50	.00	.00	.00	.00	53.40	2.25
9	JUPITER	125.44	38.50	84.50	.00	.00	.00	.00	60.05	4.00
8	CARIBE	109.61	33.00	85.00	.00	.00	.00	.00	65.18	3.75
GRAND MEAN		511.77	31.52	83.97	.00	.00	.00	.00	60.05	2.16
STANDARD ERROR OF A VARIETY MEAN		52.76	1.14	.50	.00	.00	.00	.00	1.87	.39
COEFFICIENT OF VARIATION		20.62%	7.22%	1.19%	.00%	.00%	.00%	.00%	6.24%	35.71%
5% LSD VARIETY MEANS (*****=NS)		150.28	3.24	1.42	.00	.00	.00	.00	5.33	1.10

CORRELATIONS									
(+ - PROB=.05					++ - PROB=.01)				
YIELD	KG/HA	1.00							
DAYS TO FLOWER		-.46++	1.00						
DAYS TO MATURITY		-.19	.40++	1.00					
NODULE ABUND 1		.00	.00	.00	1.00				
NODULE ABUND 2		.00	.00	.00	.00	1.00			
NODULE ACT. 1		.00	.00	.00	.00	.00	1.00		
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	1.00	
PLANT		.10	.25+	.27+	.00	.00	.00	.00	1.00
LOGGING		-.34++	.45++	.14	.00	.00	.00	.48++	1.00
SHATTER		.00	.00	.00	.00	.00	.00	.00	.00
HARVEST		.00	.00	.00	.00	.00	.00	.00	.00
PLANTS PER		.37++	.16	.24	.00	.00	.00	.00	.00
FOD		-.54++	.59++	.47++	.00	.00	.00	.37++	.03
100 SEED		.60++	-.52++	-.38++	.00	.00	.00	.16	.43++
QUALITY		-.61++	.53++	.29+	.00	.00	.00	-.33++	.15
PERCENT		.00	.00	.00	.00	.00	.00	.46++	.00

TABLE 91

EXPERIMENT 7

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	CHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
15	B/1667	.00	.00	21.65	13.58	11.75	1.00	.00	44.4	19.9
1	CH-3	.00	.00	24.55	16.60	10.88	1.25	.00	44.5	20.6
14	WILLIAMS	.00	.00	14.88	11.10	11.25	1.00	.00	45.1	19.2
12	RILLITO	.00	.00	26.90	9.15	9.50	1.50	.00	45.2	19.7
5	ORBA	.00	.00	25.03	13.43	8.00	1.25	.00	42.6	18.3
3	SJ-2	.00	.00	30.53	15.30	9.13	1.00	.00	43.5	18.7
11	KAHALA	.00	.00	16.30	12.70	11.25	2.25	.00	45.5	19.1
7	TUNIA	.00	.00	26.28	11.65	9.63	1.50	.00	45.0	18.6
10	IMPROVED PELICAN	.00	.00	23.48	13.83	8.88	1.00	.00	44.1	20.2
13	1682	.00	.00	37.88	18.68	3.88	3.75	.00		
4	HARDEE LS	.00	.00	26.08	19.50	7.63	2.00	.00	45.2	19.5
6	IAC-2	.00	.00	22.13	15.15	8.75	1.75	.00	44.6	18.4
2	UFV-1	.00	.00	18.93	14.35	6.63	2.00	.00	45.8	17.1
13	BOSSIER	.00	.00	17.15	21.45	7.88	2.00	.00	46.5	17.6
9	JUPITER	.00	.00	15.88	25.53	7.38	3.75	.00	47.2	16.3
8	CARIBE	.00	.00	13.25	15.75	6.38	3.50	.00	45.2	16.6
	GRAND MEAN	.00	.00	22.55	15.48	8.67	1.91	.00		
	STANDARD ERROR OF A VARIETY MEAN	.00	.00	1.98	.81	.35	.19	.00		
	COEFFICIENT OF VARIATION	.00%	.00%	17.52%	10.42%	8.17%	19.84%	.00%		
	5% LSD VARIETY MEANS (*****=NS)	.00	.00	5.63	2.30	1.01	.54	.00		
C O R R E L A T I O N S										
			(+ - PROB=.05	++ - PROB=.01)						
YIELD	KG/HA	.00	.00	.37++	-.54++	.60++	-.61++	.00		
DAYS TO FLOWER		.00	.00	.16	.59++	-.52++	.53++	.00		
DAYS TO MATURITY		.00	.00	.24	.47++	-.38++	.29+	.00		
NODULE ABUND 1		.00	.00	.00	.00	.00	.00	.00		
NODULE ABUND 2		.00	.00	.00	.00	.00	.00	.00		
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00		
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00		
PLANT		.00	.00	.37++	.16	-.16	.15	.00		
LOGGING		.00	.00	.03	.43++	-.33++	.46++	.00		
SHATTER		1.00	.00	.00	.00	.00	.00	.00		
HARVEST		.00	1.00	.00	.00	.00	.00	.00		
PLANT		.00	.00	.00	.00	.00	.00	.00		
PODS PER		.00	.00	1.00	-.17	-.24	-.10	.00		
POB		.00	.00	-.17	1.00	-.43++	.53++	.00		
HEIGHT		.00	.00	-.24	-.43++	1.00	-.66++	.00		
100 SEED		.00	.00	-.10	.53++	-.66++	1.00	.00		
WEIGHT		.00	.00	.00	.00	.00	.00	.00		
QUALITY OF SEED		.00	.00	.00	.00	.00	.00	.00		
PERCENT		.00	.00	.00	.00	.00	.00	1.00		
GERM.		.00	.00	.00	.00	.00	.00	.00		

TABLE 92

EXPERIMENT 36

YEAR 1978

REGION - ASIA

COUNTRY - INDONESIA

SITE - MEDAN

ELEVATION - 27 M

LONGITUDE - 98 DEG. 39 MIN. E

COOPERATOR - BARINGIN O.P., TAMPUBOLON

DATE PLANTED - AUGUST 10, 1978

DATE HARVESTED - NOVEMBER, 1978

SOIL TYPE - SAND 54%, SILT 19%, CLAY 25%, PH 5.9

FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0

AMOUNT OF MOISTURE - 569 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEULE ABUND 1	NODEULE ABUND 2	NODEULE ACT. 1	NODEULE ACT. 2	PLANT HEIGHT	LOADING
1	CH-3	3640.73	32.50	96.00	.00	.00	40.00	32.50	89.65	3.00
3	SJ-2	3273.57	31.00	92.00	.00	.00	30.00	83.75	74.50	2.00
12	RILLITO	2963.51	28.25	92.00	.00	.00	51.25	78.75	42.30	1.00
5	ORBA	2946.40	31.75	91.75	.00	.00	50.00	73.75	80.25	2.00
13	BOSSIER	2613.02	32.25	92.00	.00	.00	43.75	71.25	46.15	1.00
8	CARIBE	2406.31	32.00	107.00	.00	.00	48.75	76.25	74.78	1.00
16	COBB	2302.13	28.25	96.00	.00	.00	46.25	82.50	20.05	1.00
7	TUNIA	2264.20	32.00	92.00	.00	.00	38.75	80.00	56.35	1.00
9	JUPITER	2248.78	38.25	105.00	.00	.00	31.25	76.25	51.38	1.00
6	IAC-2	2221.69	32.25	96.00	.00	.00	33.75	86.25	72.10	2.00
15	RANSOM	2035.41	28.75	96.00	.00	.00	42.50	80.00	28.00	1.00
10	IMPROVED PELICAN	1984.98	31.75	89.00	.00	.00	47.50	86.25	90.25	4.00
4	HARDEE LS	1952.06	32.75	107.00	.00	.00	57.50	80.00	46.55	1.00
2	UFV-1	1763.27	31.50	96.00	.00	.00	51.25	81.25	32.25	1.00
14	WILLIAMS	1744.93	28.00	89.00	.00	.00	36.25	87.50	39.20	1.00
11	KAHALA	903.51	28.00	89.00	.00	.00	50.00	76.25	36.50	1.00
GRAND MEAN		2322.78	31.20	95.36	.00	.00	43.67	80.16	55.52	1.50
STANDARD ERROR OF A VARIETY MEAN		178.19	.32	.06	.00	.00	4.45	2.97	4.06	.60
COEFFICIENT OF VARIATION		15.34%	2.06%	.13%	.00%	.00%	20.39%	7.40%	14.64%	79.50%
5% LSD VARIETY MEANS (*****=NS)		507.56	.92	.18	.00	.00	12.68	8.45	11.58	1.70
C O R R E L A T I O N S										
					(+ - PROB=.05			++ - PROB=.01)		
YIELD	KG/HA	1.00	.19	.05	.00	.00	-.27+	.06	.50++	.26+
DAYS TO	FLOWER	.19	1.00	.55++	.00	.00	-.26+	-.17	.37++	.08
DAYS TO	MATURITY	.05	.55++	1.00	.00	.00	.09	-.14	-.01	-.19
NODEULE	ABUND 1	.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODEULE	ABUND 2	.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODEULE	ACT. 1	-.27+	-.26+	.09	.00	.00	1.00	-.23	-.14	-.13
NODEULE	ACT. 2	.06	-.17	-.14	.00	.00	-.23	1.00	.14	.27+
PLANT	HEIGHT	.50++	.37++	-.01	.00	.00	-.14	.14	1.00	.64++
LODGING		.26+	.08	-.19	.00	.00	-.13	.27+	.64++	1.00
SHATTER		.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS	HARVEST	.48++	-.04	-.21	.00	.00	-.15	.15	.13	.00
PODS PER	PLANT	.45++	.28+	.43++	.00	.00	-.07	.00	.18	.14
POD	HEIGHT	.33++	.48++	.14	.00	.00	-.18	.19	.52++	.78++
100 SEED	WEIGHT	-.14	-.46++	-.48++	.00	.00	-.16	.13	-.45++	.51++
QUALITY	OF SEED	.00	.00	.00	.00	.00	.00	.00	.00	.00
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 92 EXPERIMENT 36 YEAR 1973 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
1	CH-3	1.00	307.00	52.68	12.50	13.55	.00	.00	44.0	21.4
3	SJ-2	1.00	272.50	70.20	10.50	11.58	.00	.00	40.7	21.5
12	RILLITO	1.00	226.75	58.58	6.93	13.25	.00	.00	43.4	22.9
5	OREA	1.00	308.75	41.83	9.08	13.25	.00	.00	42.9	22.4
13	BOSSIER	1.00	299.50	41.20	9.30	12.80	.00	.00		
8	CARIBE	1.00	203.75	88.65	7.78	7.93	.00	.00	40.5	20.8
16	COBE	1.00	297.00	33.28	6.45	15.50	.00	.00	40.5	24.8
7	TUNIA	1.00	166.75	63.40	8.18	13.08	.00	.00	42.3	23.1
9	JUPITER	1.00	213.75	41.40	9.70	12.68	.00	.00	44.7	22.5
6	IAC-2	1.00	221.25	59.05	12.00	11.83	.00	.00	43.0	22.3
15	RANSOM	1.00	291.25	25.68	6.43	16.15	.00	.00	42.2	26.8
10	IMPROVED PELICAN	1.00	253.50	47.28	12.18	11.68	.00	.00	33.0	27.6
4	HARDEE LS	1.00	156.00	66.90	7.55	11.20	.00	.00	42.8	23.3
2	UFV-1	1.00	299.25	28.85	7.18	12.98	.00	.00	45.1	21.3
14	WILLIAMS	1.00	278.50	23.13	6.63	16.58	.00	.00	43.5	23.5
11	KAHALA	1.00	105.25	31.18	7.30	15.45	.00	.00	33.0	28.2
	GRAND MEAN	1.00	243.80	48.33	8.98	13.09	.00	.00		
	STANDARD ERROR OF A VARIETY MEAN	.00	12.45	3.71	.71	.68	.00	.00		
	COEFFICIENT OF VARIATION	.00%	10.21%	15.35%	15.81%	10.44%	.00%	.00%		
	5% LSD VARIETY MEANS (*****=NS)	.00	35.46	10.56	2.02	1.95	.00	.00		

C O R R E L A T I O N S

++ - PROB=.01)

(+ - - - PROB=.05

YIELD KG/HA	YIELD KG/HA
DAYS TO FLOWER	.00
DAYS TO MATURITY	.00
NODULE ABUND 1	.00
NODULE ABUND 2	.00
NODULE ACT. 1	.00
NODULE ACT. 2	.00
PLANT HEIGHT	.00
LODGING	.00
SHATTER	1.00
PLANTS HARVEST	.00
PODS PER PLANT	.00
FOOD HEIGHT	.00
100 SEED WEIGHT	.00
QUALITY OF SEED	.00
PERCENT GERM.	.00

.48++	.45++	.33++	.14	.00
-.04	.28+	.48++	-.46++	.00
-.21	.43++	.14	-.48++	.00
.00	.00	.00	.00	.00
.00	.00	.00	.00	.00
-.15	-.07	-.18	-.16	.00
.15	.00	.19	.13	.00
.13	.52++	.78++	-.45++	.00
.18	.14	.51++	-.04	.00
.00	.00	.00	.00	.00
1.00	.00	.09	.19	.00
.00	-.32++	.41++	-.74++	.00
.00	.09	1.00	-.49++	.00
.00	.19	-.49++	1.00	.00
.00	.00	.00	.00	.00
.00	.00	.00	1.00	.00
.00	.00	.00	.00	1.00

TABLE 93 EXPERIMENT 20 YEAR 1978

REGION - ASIA
 SITE - SOROPADAN
 DATE PLANTED - JUNE 22, 1978
 SOIL TYPE - SAND 22%, SILT 34%, CLAY 44%
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9
 LOCAL VARIETY - TAICHUNG

COUNTRY - INDONESIA

ELEVATION - 500 M

DATE HARVESTED -

COUNTRY - INDONESIA

ELEVATION - 500 M

DATE HARVESTED -

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
9	JUPITER	853.53	38.25	85.00	.00	.00	.00	.00	36.00	1.00
16	TAICHUNG	625.12	31.25	75.00	.00	.00	.00	.00	41.50	1.00
5	ORBA	620.96	30.50	77.00	.00	.00	.00	.00	43.25	1.00
10	IMPROVED PELICAN	475.09	33.75	77.00	.00	.00	.00	.00	46.00	1.00
3	SJ-2	431.34	34.00	81.00	.00	.00	.00	.00	39.25	1.00
1	CH-3	352.15	31.50	85.00	.00	.00	.00	.00	39.50	1.00
15	RANSOM	318.81	28.25	79.50	.00	.00	.00	.00	27.25	1.00
14	WILLIAMS	302.14	28.75	75.00	.00	.00	.00	.00	28.00	1.00
6	IAC-2	256.30	31.75	79.00	.00	.00	.00	.00	30.75	1.00
12	RILLITO	254.22	30.00	75.00	.00	.00	.00	.00	28.00	1.00
11	GASOY 17	235.46	28.00	75.00	.00	.00	.00	.00	22.75	1.00
4	HARDEE LS	187.54	38.75	91.00	.00	.00	.00	.00	30.50	1.00
8	CARIBE	181.29	32.25	83.00	.00	.00	.00	.00	43.50	1.00
13	BOSSIER	172.95	31.75	85.00	.00	.00	.00	.00	40.75	1.00
7	TUNIA	134.61	30.25	79.00	.00	.00	.00	.00	28.50	1.00
2	UFV-1	63.76	34.00	85.00	.00	.00	.00	.00	25.25	1.00
GRAND MEAN		341.58	32.06	80.41	.00	.00	.00	.00	34.42	1.00
STANDARD ERROR OF A VARIETY MEAN		164.57	.67	.52	.00	.00	.00	.00	2.56	.00
COEFFICIENT OF VARIATION		96.36%	4.19%	1.29%	.00%	.00%	.00%	.00%	14.85%	.00%
5% LSD VARIETY MEANS (*****=NS)		*****	1.92	1.48	.00	.00	.00	.00	7.28	.00

CORRELATIONS

(+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
1.00	.14	.11	.00	.00	.00	.00	.24	.00
.14	1.00	.69++	.00	.00	.00	.00	.22	.00
-.11	.69++	1.00	.00	.00	.00	.00	.07	.00
.00	.00	.00	1.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	1.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	1.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	1.00	.00	.00
.24	.22	.07	.00	.00	.00	.00	1.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00
.22	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00
.22	.00	.00	.00	.00	.00	.00	.00	.00
.21	.20	.25+	.00	.00	.00	.00	.38++	.00
.24	.46++	.20	.00	.00	.00	.00	.14	.00
-.03	-.49++	-.53++	.00	.00	.00	.00	.40++	.00
.00	.00	.00	.00	.00	.00	.00	-.16	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 93 EXPERIMENT 20 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
9	JUPITER	1.00	161.25	31.40	15.90	6.83	.00	.00
16	TAICHUNG	1.00	292.75	30.85	11.15	7.88	.00	.00
5	ORBA	1.00	186.75	42.90	9.35	8.15	.00	.00
10	IMPROVED PELICAN	1.00	263.50	32.25	13.55	7.98	.00	.00
3	SJ-2	1.00	180.50	37.20	11.15	8.33	.00	.00
1	CH-3	1.00	155.50	46.25	11.40	8.70	.00	.00
15	RANSOM	1.00	226.75	35.15	7.40	8.08	.00	.00
14	WILLIAMS	1.00	207.25	21.65	9.90	10.60	.00	.00
6	IAC-2	1.00	157.25	33.55	10.45	7.73	.00	.00
12	RILLITO	1.00	151.50	35.10	8.45	8.53	.00	.00
11	GASOY 17	1.00	203.25	22.95	8.60	8.35	.00	.00
4	HARDEE LS	1.00	150.25	40.60	11.60	6.38	.00	.00
8	CARIBE	1.00	183.00	31.95	9.65	6.23	.00	.00
13	BOSSIER	1.00	208.25	31.20	10.90	7.68	.00	.00
7	TUNIA	1.00	99.25	27.70	9.80	10.40	.00	.00
2	UFV-1	1.00	115.25	29.80	6.55	6.38	.00	.00
GRAND MEAN								
		1.00	183.89	33.16	10.36	8.01	.00	.00
STANDARD ERROR OF A VARIETY MEAN								
		.00	17.63	3.62	1.00	.33	.00	.00
COEFFICIENT OF VARIATION								
		.00%	19.17%	21.84%	19.27%	8.26%	.00%	.00%
5% LSD VARIETY MEANS (*****=NS)								
		.00	50.20	10.31	2.84	.94	.00	.00
C O R R E L A T I O N S								
			(+ - PROB=.05					
					++ - PROB=.01)			
YIELD	KG/HA	.00	.22	.21	.24	-.03	.00	.00
DAYS TO	FLOWER	.00	-.18	.20	.46++	-.49++	.00	.00
DAYS TO	MATURITY	.00	-.37++	.25+	.20	-.53++	.00	.00
NODULE	ABUND 1	.00	.00	.00	.00	.00	.00	.00
NODULE	ABUND 2	.00	.00	.00	.00	.00	.00	.00
NODULE	ACT. 1	.00	.00	.00	.00	.00	.00	.00
NODULE	ACT. 2	.00	.00	.00	.00	.00	.00	.00
PLANT	HEIGHT	.00	.38++	.14	.40++	-.16	.00	.00
LODGING		.00	.00	.00	.00	.00	.00	.00
SHATTER		1.00	.00	.00	.00	.00	.00	.00
HARVEST		.00	1.00	-.12	.21	.03	.00	.00
PLANTS	PER PLANT	.00	-.12	1.00	-.03	-.27+	.00	.00
PODS	HEIGHT	.00	.21	-.03	1.00	-.08	.00	.00
100 SEED	WEIGHT	.00	.03	-.27+	-.08	1.00	.00	.00
QUALITY	OF SEED	.00	.00	.00	.00	.00	1.00	.00
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	1.00

TABLE 94

EXPERIMENT 209

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
11	ELF	.00	.00	13.00	.00	13.23	.00	.00
13	UNION	.00	.00	13.75	.00	15.05	.00	.00
1	WILLIAMS	.00	.00	13.00	.00	13.70	.00	.00
3	FRANKLIN	.00	.00	16.75	.00	11.08	.00	.00
7	SWIFT	.00	.00	13.75	.00	11.55	.00	.00
4	KWANGKYO	.00	.00	18.75	.00	16.15	.00	.00
5	MITCHELL	.00	.00	15.50	.00	11.83	.00	.00
10	HODGSON	.00	.00	13.50	.00	10.95	.00	.00
14	CORSOY	.00	.00	15.25	.00	9.63	.00	.00
12	COLUMBUS	.00	.00	19.00	.00	13.28	.00	.00
2	CALLAND	.00	.00	13.50	.00	10.80	.00	.00
9	HARCOR	.00	.00	11.25	.00	9.28	.00	.00
6	ALTONA	.00	.00	11.25	.00	12.28	.00	.00
15	EVANS	.00	.00	15.25	.00	9.18	.00	.00
16	CRAWFORD	.00	.00	11.25	.00	12.13	.00	.00
8	STEELE	.00	.00	11.25	.00	10.58	.00	.00
	GRAND MEAN	.00	.00	14.27	.00	11.92	.00	.00
	STANDARD ERROR OF A VARIETY MEAN	.00	.00	1.27	.00	.37	.00	.00
	COEFFICIENT OF VARIATION	.00%	.00%	17.82%	.00%	6.17%	.00%	.00%
	5% LSD VARIETY MEANS (*****=NS)	.00	.00	3.62	.00	1.05	.00	.00
C O R R E L A T I O N S								
	YIELD	.00	.00	.27+	.00	.54++	.00	.00
	KB/HA	.00	.00	.00	.00	.00	.00	.00
	DAYS TO FLOWER	.00	.00	.00	.00	.00	.00	.00
	DAYS TO MATURITY	.00	.00	.00	.00	.00	.00	.00
	NODULE ABUND 1	.00	.00	.00	.00	.00	.00	.00
	NODULE ABUND 2	.00	.00	.00	.00	.00	.00	.00
	NODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00
	NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00
	PLANT	.00	.00	.48++	.00	.42++	.00	.00
	HEIGHT	.00	.00	.00	.00	.00	.00	.00
	LODGING	.00	.00	.00	.00	.00	.00	.00
	SHATTER	1.00	.00	.00	.00	.00	.00	.00
	HARVEST	.00	1.00	.00	.00	.00	.00	.00
	PLANTS	.00	.00	1.00	.00	.33++	.00	.00
	PODS PER PLANT	.00	.00	.00	1.00	.00	.00	.00
	POD	.00	.00	.33++	.00	1.00	.00	.00
	HEIGHT	.00	.00	.00	.00	.00	.00	.00
	100 SEED WEIGHT	.00	.00	.00	.00	.00	1.00	.00
	QUALITY OF SEED	.00	.00	.00	.00	.00	.00	.00
	PERCENT	.00	.00	.00	.00	.00	.00	1.00
	GERM.	.00	.00	.00	.00	.00	.00	.00

++ - PROB=.01)

(+ - PROB=.05

TABLE 95

EXPERIMENT 25

YEAR 1978

REGION - ASIA
 SITE - SARAWAK
 COUNTRY - MALAYSIA
 ELEVATION - 30 M
 LONGITUDE - 110 DEG, 33 MIN. E
 LATITUDE - 1 DEG, 10 MIN. N
 COOPERATORS - MAC PHERSON & J. L. CHIA
 DATE PLANTED - MAY 15, 1978
 DATE HARVESTED - AUGUST, 1978
 SOIL TYPE - RECENT ALLUVIAL SOIL, TERBAT SERIES SAND 22.69%, SILT 31.55%,
 CLAY 43.71%, PH 5.6
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 923 MM
 LOCAL VARIETY - NONUK

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
4	HARDEE LS	2279.62	41.00	112.50	3.00	1.75	67.50	65.00	29.45	1.00
9	JUPITER	2192.10	41.00	108.25	3.50	2.00	77.50	57.50	49.70	1.00
7	TUNIA	2104.59	34.00	105.00	3.25	2.25	95.00	27.50	43.25	1.00
3	SJ-2	2042.07	36.00	98.75	3.75	2.25	86.25	37.50	54.35	1.00
1	CH-3	1912.88	36.00	104.00	4.00	2.25	65.00	41.25	69.95	1.00
6	IAC-2	1875.37	36.00	104.00	3.50	2.50	68.75	47.50	51.30	1.00
10	IMPROVED PELICAN	1837.87	36.00	96.25	4.00	3.00	52.50	22.50	57.75	1.00
8	CARIBE	1833.70	39.00	127.00	3.50	2.25	82.50	72.50	72.10	1.00
13	WILLIAMS	1787.86	29.00	87.50	3.00	2.50	77.50	42.50	37.35	1.00
12	BOSSIER	1621.16	36.00	99.25	3.00	2.50	85.00	25.00	38.00	1.00
11	RILLITO	1562.81	31.00	91.25	3.25	2.50	70.00	15.00	33.95	1.00
14	RANSOM	1541.97	31.00	105.75	3.00	2.25	76.25	38.75	24.70	1.00
2	UFV-1	1450.29	33.25	106.00	4.00	2.50	65.00	52.50	23.55	1.00
5	OREA	1316.93	36.00	92.75	3.75	3.50	53.75	21.25	40.55	1.00
16	GASOY 17	1141.89	29.00	87.50	3.75	3.50	80.00	28.75	22.10	1.00
15	NONUK	1041.87	43.00	106.50	3.00	2.00	52.50	57.50	68.55	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.20	.31+	-.08	-.24	.31+	.16	.33++	.00
DAYS TO	FLOWER	.20	1.00	.62++	-.04	-.40++	-.14	.44++	.53++	.00
DAYS TO	MATURITY	.31+	.62++	1.00	-.06	-.41++	-.02	.59++	.36++	.00
NODULE	ABUND 1	-.08	-.04	-.06	1.00	.26+	-.18	-.09	.03	.00
NODULE	ABUND 2	-.24	-.40++	-.41++	.26+	1.00	.09	-.45++	-.18	.00
NODULE	ACT. 1	.31+	-.14	-.02	-.18	.09	1.00	-.00	.09	.00
NODULE	ACT. 2	.16	.44++	.59++	-.09	-.45++	-.00	1.00	.21	.00
PLANT	HEIGHT	.33++	.53++	.36++	.03	-.18	.09	.21	1.00	.00
LODGING		.00	.00	.00	.00	.00	.00	.00	.00	1.00
SHATTER		.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS	HARVEST	-.15	-.46++	-.45++	.23	.36++	-.04	-.29+	-.38++	.00
PODS PER	PLANT	.57++	.55++	.55++	-.12	-.37++	.20	.32+	.53++	.00
POD	HEIGHT	.19	.68++	.43++	.06	-.27+	-.11	.32++	.52++	.00
100 SEED	WEIGHT	.35++	-.54++	-.28+	-.20	.03	.25+	-.19	-.45++	.00
QUALITY	OF SEED	.01	.05	.22	.16	-.02	-.16	.15	-.00	.00
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 95

EXPERIMENT 25

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
4	HARDEE LS	1.00	214.75	27.38	12.20	15.70	1.50	.00	35.9	25.7
9	JUPITER	1.00	241.50	26.53	16.50	16.65	1.75	.00	40.3	26.4
7	TUNIA	1.00	206.75	24.68	11.20	20.63	1.25	.00	39.7	23.8
3	SJ-2	1.00	230.75	27.85	15.85	12.48	1.00	.00	40.1	18.6
1	CH-3	1.00	225.25	20.90	12.10	15.20	1.50	.00	44.6	20.0
6	IAC-2	1.00	236.75	21.08	12.00	15.35	1.50	.00	42.0	22.3
10	IMPROVED PELICAN	1.00	275.75	20.83	11.65	13.40	1.75	.00	41.9	22.6
8	CARIBE	1.00	216.50	30.68	13.65	10.30	1.75	.00	44.1	16.1
13	WILLIAMS	1.00	282.75	13.25	10.15	19.58	1.50	.00	43.7	23.5
12	BOSSIER	1.00	278.00	15.45	8.75	15.43	1.75	.00	41.9	23.1
11	RILLITO	1.00	244.00	14.35	8.10	14.90	1.25	.00	42.1	23.1
14	RANSOM	1.00	264.25	12.78	8.15	17.40	1.75	.00	42.8	20.6
2	UFV-1	1.00	239.75	15.28	7.75	15.08	1.75	.00	41.0	20.3
5	ORBA	1.00	217.75	18.70	8.95	13.20	1.50	.00	40.7	22.4
16	GASOY 17	1.00	287.50	11.20	6.45	15.88	1.25	.00	40.7	22.4
15	NONOK	1.00	206.00	22.78	18.45	8.93	1.25	.00	41.8	15.6
	GRAND MEAN	1.00	241.75	20.23	11.37	15.00	1.50	.00		
	STANDARD ERROR OF A VARIETY MEAN	.00	11.47	2.81	1.18	.43	.26	.00		
	COEFFICIENT OF VARIATION	.00%	9.49%	27.76%	20.77%	5.69%	34.78%	.00%		
	5% LSD VARIETY MEANS (*****=NS)	.00	32.67	8.00	3.36	1.22	*****	.00		
C O R R E L A T I O N S										
			(+ - PROB=.05		++ - PROB=.01)					
YIELD	KG/HA	.00	-.15	.57++	.19	.35++	.01	.00		
DAYS TO	FLOWER	.00	-.46++	.59++	.68++	-.54++	.05	.00		
DAYS TO	MATURITY	.00	-.45++	.55++	.43++	-.28+	.22	.00		
NODULE	ABUND 1	.00	.23	-.12	.06	-.20	.16	.00		
NODULE	ABUND 2	.00	.36++	-.37++	-.27+	.03	-.02	.00		
NODULE	ACT. 1	.00	-.04	.20	-.11	.25+	-.16	.00		
NODULE	ACT. 2	.00	-.29+	.32+	.32++	-.19	.15	.00		
PLANT	HEIGHT	.00	-.38++	.53++	.52++	-.45++	-.00	.00		
LODGING		.00	.00	.00	.00	.00	.00	.00		
SHATTER		1.00	.00	.00	.00	.00	.00	.00		
HARVEST		.00	1.00	-.47++	-.28+	.22	.14	.00		
PLANTS	PER PLANT	.00	-.47++	1.00	.56++	-.22	-.12	.00		
PODS PER	POD	.00	-.28+	.56++	1.00	-.40++	-.03	.00		
100 SEED	WEIGHT	.00	.22	-.22	-.40++	1.00	-.02	.00		
QUALITY	OF SEED	.00	.14	-.12	-.03	-.02	1.00	.00		
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	1.00		

TABLE 96

EXPERIMENT 139

YEAR 1978

REGION - ASIA
 SITE - BIRGUNJ
 LATITUDE - 27 DEG. 2 MIN. N
 COOPERATER - R.P. SAH, B.R. PANDEY
 DATE PLANTED - JUNE 23, 1978
 SOIL TYPE - SILT LOAM
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9
 AMOUNT OF MOISTURE - 1389 MM

COUNTRY - NEPAL
 ELEVATION - 100 M
 LONGITUDE - 84 DEG. 35 MIN. E
 DATE HARVESTED - SEPTEMBER 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	ABUND 1	ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOADING
2	RILLITO	3196.47	48.00	123.00	2.50	1.00	95.00	89.00	83.25	1.75
15	BRAGG	2729.71	50.00	127.00	2.25	1.50	92.50	65.00	41.50	1.00
1	IMPROVED PELICAN	2267.12	56.00	127.00	3.00	2.50	90.50	60.00	112.50	2.00
6	COBB	2200.44	48.00	136.00	3.00	1.50	72.50	95.00	39.25	1.00
5	RANSOM	2008.73	48.00	122.50	1.50	2.50	100.00	75.00	30.25	1.00
9	DAVIS	1825.36	46.00	127.00	2.00	2.50	97.50	90.00	38.75	1.00
10	GASOY 17	1733.68	48.00	119.00	3.50	2.00	85.00	85.00	37.00	1.00
3	BOSSIER	1733.68	48.00	132.00	2.50	2.00	87.50	85.00	44.25	1.00
16	EVANS	1441.95	42.00	102.00	2.50	2.25	97.50	87.50	51.25	1.00
12	FRANKLIN	1408.61	37.00	100.00	2.50	2.00	95.00	60.00	40.25	1.00
14	MITCHELL	1346.10	37.00	96.00	2.50	1.50	97.50	85.00	49.25	1.00
4	WILLIAMS	1308.59	42.00	96.00	3.00	1.50	90.00	80.00	43.00	1.00
11	CALLAND	1308.59	37.00	89.00	2.25	2.00	85.00	65.00	52.75	1.00
13	CUTLER 71	1171.07	37.00	86.00	2.75	2.50	87.50	70.00	45.00	1.00
8	FORREST	979.36	48.00	103.00	3.00	2.00	90.00	60.00	30.50	1.00
7	JAMES	946.02	48.00	100.00	1.50	2.50	92.50	80.00	53.75	1.25
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS										
(+ - PROB=.05 +- - PROB=.01)										
YIELD	KG/HA	1.00								
DAYS TO FLOWER		.43++	.43++	.58++	-.04	-.24	.05	.04	.33++	.34++
DAYS TO MATURITY		.58++	1.00	.80++	.03	.05	-.04	.01	.36++	.48++
NODULE ABUND 1		-.04	.03	.01	1.00	-.09	-.59++	.28+	.15	.25+
NODULE ABUND 2		-.24	.05	-.09	1.00	1.00	-.09	-.04	.09	.09
NODULE ACT. 1		.05	-.04	-.09	-.59++	.12	1.00	-.10	.03	.01
NODULE ACT. 2		.04	.01	.28+	-.04	-.09	-.10	1.00	.10	.01
HEIGHT		.33++	.36++	.15	.06	-.03	.10	1.00	-.17	-.19
LOADING		.34++	.48++	.25+	.09	.01	.01	1.00	1.00	.83++
SHATTER		.00	.00	.00	.00	.00	.00	-.19	.83++	1.00
HARVEST		.25	.09	.00	.11	-.00	.01	.00	.00	.00
PLANTS PER		.30+	.42++	.28+	.15	-.00	.08	-.46++	.13	.19
POD		.14	.24	.21	.26+	-.12	-.13	-.02	.48++	.60++
100 SEED		.00	.00	.00	.00	-.06	-.09	-.09	.46++	.38++
WEIGHT		.00	.00	.00	.00	.00	.00	.00	.00	.00
QUALITY		.00	.00	.00	.00	.00	.00	.00	.00	.00
OF SEED		.00	.00	.00	.00	.00	.00	.00	.00	.00
PERCENT		.00	.00	.00	.00	.00	.00	.00	.00	.00
GERM.		.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 96 EXPERIMENT 139 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
2	KILLITO	.00	98.50	80.00	10.75	.00	.00	.00
15	BRAGO	.00	103.25	50.75	8.25	.00	.00	.00
1	IMPROVED PELICAN	.00	105.25	69.25	13.25	.00	.00	.00
6	COBE	.00	93.75	54.25	10.75	.00	.00	.00
5	RANSOM	.00	93.75	49.00	9.50	.00	.00	.00
9	DAVIS	.00	84.00	45.75	7.25	.00	.00	.00
10	GASOY 17	.00	96.00	55.50	9.50	.00	.00	.00
3	BOSSIER	.00	95.75	37.50	11.75	.00	.00	.00
16	EVANS	.00	86.25	59.50	8.25	.00	.00	.00
12	FRANKLIN	.00	102.50	39.75	9.50	.00	.00	.00
14	MITCHELL	.00	92.50	48.75	9.25	.00	.00	.00
4	WILLIAMS	.00	92.50	48.25	8.00	.00	.00	.00
11	CALLAND	.00	101.00	41.25	11.00	.00	.00	.00
13	CUTLER 71	.00	94.75	38.00	8.75	.00	.00	.00
8	FORREST	.00	101.00	52.50	8.25	.00	.00	.00
7	JAMES	.00	89.50	52.00	9.50	.00	.00	.00
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN		.00	95.64	51.38	9.59	.00	.00	.00
COEFFICIENT OF VARIATION		.00%	6.04	5.25	.94	.00	.00	.00
5% LSD VARIETY MEANS (*****=NS)		.00	12.64%	20.43%	19.52%	.00%	.00%	.00%
		.00	*****	14.95	2.67	.00	.00	.00
C O R R E L A T I O N S								
			(+ - PROB=.05		++ - PROB=.01)			
YIELD	KG/HA	.00	.25	.30+	.14	.00	.00	.00
DAYS TO FLOWER		.00	.09	.42++	.24	.00	.00	.00
DAYS TO MATURITY		.00	.00	.28+	.21	.00	.00	.00
NODULE AROUND 1		.00	.11	.15	.26+	.00	.00	.00
NODULE AROUND 2		.00	.00	.12	.06	.00	.00	.00
NODULE ACT. 1		.00	.01	.08	.13	.00	.00	.00
NODULE ACT. 2		.00	-.46++	.02	.09	.00	.00	.00
PLANT HEIGHT		.00	.13	.48++	.46++	.00	.00	.00
LODGING		.00	.19	.60++	.38++	.00	.00	.00
SHATTER		1.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST		.00	1.00	.08	.33++	.00	.00	.00
PODS PER PLANT		.00	.08	1.00	.08	.00	.00	.00
POD HEIGHT		.00	.33++	.08	1.00	.00	.00	.00
100 SEED WEIGHT		.00	.00	.00	.00	1.00	.00	.00
QUALITY OF SEED		.00	.00	.00	.00	.00	1.00	.00
PERCENT GERM.		.00	.00	.00	.00	.00	.00	1.00

TABLE 97 EXPERIMENT 138 YEAR 1978

REGION - ASIA COUNTRY - NEPAL
 SITE - KATHMANDU ELEVATION - 1860 M
 LATITUDE - 27 DEG. 40 MIN. N LONGITUDE - 85 DEG. 20 MIN. E
 COOPERATORS - M.P. BHARATI, S.K. JAISWAL
 DATE PLANTED - MAY 21, 1978 DATE HARVESTED - SEPTEMBER, 1978
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 1068 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEULE ABUND 1	NODEULE ABUND 2	NODEULE ACT. 1	NODEULE ACT. 2	PLANT HEIGHT	LODGING
9	DAVIS	1659.08	62.00	128.00	.00	1.25	.00	87.50	66.85	4.00
6	COBB	1481.96	62.00	147.25	.00	1.00	.00	77.50	81.30	2.00
13	CUTLER 71	1364.02	54.00	110.00	.00	2.00	.00	92.50	63.10	2.00
5	RANSOM	1329.85	61.00	128.00	.00	1.75	.00	85.00	61.55	2.00
15	BRAGO	1303.18	62.00	128.00	.00	1.75	.00	97.50	57.75	2.00
16	CRAWFORD	1297.76	50.00	120.00	.00	2.25	.00	97.50	67.55	2.00
14	MITCHELL	1087.30	52.00	120.00	.00	2.25	.00	87.50	61.90	1.75
7	JAMES	975.61	54.00	120.00	.00	1.00	.00	90.00	73.35	2.75
4	WILLIAMS	936.02	55.00	110.00	.00	1.25	.00	97.50	53.40	1.50
8	FORREST	861.01	61.00	128.00	.00	1.50	.00	72.50	66.05	2.25
3	BOSSIER	761.40	64.00	146.00	.00	1.75	.00	87.50	76.85	2.25
2	RILLITO	729.73	60.00	120.00	.00	2.25	.00	80.00	80.45	3.25
12	FRANKLIN	675.13	55.00	110.00	.00	1.25	.00	90.00	60.75	1.50
10	GASOY 17	540.11	65.00	128.00	.00	1.25	.00	72.50	57.48	3.75
1	IMPROVED PELICAN	471.76	73.00	151.00	.00	1.00	.00	92.50	82.80	2.50
11	CALLAND	405.08	54.00	110.00	.00	1.75	.00	90.00	53.70	1.75
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00								
DAYS TO FLOWER		-.19	.03							
DAYS TO MATURITY		1.00	.80++							
NODEULE ABUND 1		.03	1.00							
NODEULE ABUND 2		.00	.00		1.00					
NODEULE ACT. 1		.10	-.21		.00					
NODEULE ACT. 2		.00	.00		.00					
PLANT		.01	-.16		.00		1.00			
LODGING		.00	.36++		.00		.00			
SHATTER		.04	.25+		.00		.00			
HARVEST		-.06	.28+		.00		.00			
PLANTS PER		.36++	-.04		.00		.00			
PODS PER		-.02	-.56++		.00		.00			
100 SEED		.17	-.64++		.00		.00			
QUALITY		.00	.00		.00		.00			
PERCENT		.00	.00		.00		.00			
GERM.		.00	.00		.00		.00			
STANDARD ERROR OF A VARIETY MEAN		992.44	59.00	125.27	.00	1.58	.00	87.34	66.55	2.33
COEFFICIENT OF VARIATION		115.37	.00	.31	.00	.35	.00	4.61	3.84	.29
5% LSD VARIETY MEANS (*****=NS)		23.25%	.00%	.50%	.00%	44.88%	.00%	15.13%	11.55%	24.76%
		328.63	.00	.89	.00	*****	.00	*****	10.95	.82

TABLE 97
EXPERIMENT 138
YEAR 1978
(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANT HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
9	DAVIS	1.00	220.25	19.00	6.00	12.00	.00	.00
3	COBB	1.00	177.00	25.50	17.70	10.00	.00	.00
13	CUTLER 71	1.00	235.25	19.43	16.35	16.25	.00	.00
5	RANSOM	1.00	227.00	12.25	7.65	17.25	.00	.00
15	BRAGG	1.00	253.00	17.35	6.15	13.25	.00	.00
16	CRAWFORD	1.25	142.00	17.60	19.05	15.25	.00	.00
14	MITCHELL	2.25	193.50	11.35	16.80	17.50	.00	.00
7	JAMES	1.25	223.75	15.00	23.70	15.75	.00	.00
4	WILLIAMS	1.00	203.50	14.70	14.10	17.75	.00	.00
8	FORREST	1.00	207.50	16.50	8.90	10.50	.00	.00
3	BOSSIER	1.00	168.00	2.50	12.85	10.25	.00	.00
2	RILLITO	1.25	185.00	16.80	22.50	11.25	.00	.00
12	FRANKLIN	1.00	193.75	10.10	18.35	13.50	.00	.00
10	GASOY 17	1.25	221.25	18.90	7.75	11.00	.00	.00
1	IMPROVED PELICAN	1.00	246.25	11.20	6.90	10.00	.00	.00
11	CALLAND	1.00	223.50	10.60	13.50	16.00	.00	.00
GRAND MEAN		1.14	207.91	14.94	13.64	13.59	.00	.00
STANDARD ERROR OF A VARIETY MEAN		.19	12.54	2.01	1.75	.96	.00	.00
COEFFICIENT OF VARIATION		33.20%	12.06%	26.89%	25.59%	14.13%	.00%	.00%
LSD VARIETY MEANS (*****=NS)		.54	35.71	5.72	4.97	2.74	.00	.00

CORRELATIONS

C O R R E L A T I O N S					(4 - PROB=.05	++ - PROB=.01)
YIELD	KG/HA	.04	-.06	.36++	-.02	.17
DAYS TO FLOWER		-.25+	.23+	-.04	-.52++	.64++
DAYS TO MATURITY		-.10	-.02	.02	-.33++	.62++
NODULE AROUND 1		.00	.00	.00	.00	.00
NODULE AROUND 2		.35++	-.26+	-.10	.09	.24
NODULE ACT. 1		.00	.00	.00	.00	.00
NODULE ACT. 2		-.30+	.01	.11	.02	.22
PLANT HEIGHT		.08	.10	.09	.32++	.44++
LODDING		.07	.16	.20	.13	.26++
SHATTER		1.00	-.12	.05	.23	.21
HARVEST		-.12	1.00	.07	-.35++	.07
PLANT		-.05	.07	1.00	.06	.16
PODS PER		.23	-.25++	.06	1.00	.20
POD		.21	.07	.16	.20	1.00
100 SEED		.00	.00	.00	.00	.00
QUALITY		.00	.00	.00	.00	1.00
GERM.		.00	.00	.00	.00	.00
PERCENT						1.00

TABLE 98 EXPERIMENT 142 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
6	COBB	.00	216.75	29.75	.00	15.05	.00	.00
15	BRAGG	.00	200.50	47.25	.00	16.18	.00	.00
10	GASOY 17	.00	230.50	43.50	.00	17.08	.00	.00
9	DAVIS	.00	215.50	44.00	.00	17.13	.00	.00
4	WILLIAMS	.00	193.50	42.25	.00	19.15	.00	.00
16	CRAWFORD	.00	205.50	39.25	.00	16.30	.00	.00
3	BOSSIER	.00	188.25	55.50	.00	13.90	.00	.00
8	FORREST	.00	169.50	41.25	.00	15.00	.00	.00
5	RANSOM	.00	158.50	31.00	.00	17.18	.00	.00
1	IMPROVED PELICAN	.00	208.75	51.25	.00	11.73	.00	.00
13	CUTLER 71	.00	237.75	32.50	.00	17.50	.00	.00
2	RILLITO	.00	181.75	39.50	.00	17.28	.00	.00
11	CALLAND	.00	227.25	35.00	.00	17.00	.00	.00
7	JAMES	.00	242.75	38.50	.00	18.35	.00	.00
14	MITCHELL	.00	199.00	38.75	.00	16.90	.00	.00
12	FRANKLIN	.00	205.50	34.00	.00	17.53	.00	.00
	GRAND MEAN	.00	205.08	40.20	.00	16.45	.00	.00
	STANDARD ERROR OF A VARIETY MEAN	.00	12.48	5.94	.00	.43	.00	.00
	COEFFICIENT OF VARIATION	.00%	12.17%	29.54%	.00%	5.18%	.00%	.00%
	5% LSD VARIETY MEANS (*****=NS)	.00	35.55	*****	.00	1.21	.00	.00

C O R R E L A T I O N S				++ - PROB=.01)	
				+ - PROB=.05	
YIELD	KG/HA	.00	.17	.22	.00
DAYS TO	FLOWER	.00	-.24	.14	.00
DAYS TO	MATURITY	.00	-.27+	.15	.00
NODULE	ABUND 1	.00	.00	.00	.00
NODULE	ABUND 2	.00	-.29+	.00	.00
NODULE	ACT. 1	.00	.00	.00	.00
NODULE	ACT. 2	.00	-.05	-.28+	.00
PLANT	HEIGHT	.00	-.09	.31+	.00
LODGING		.00	.00	.00	.00
SHATTER		1.00	.00	.00	.00
HARVEST		.00	1.00	.18	.00
PLANTS	PER PLANT	.00	-.18	1.00	.00
POD	HEIGHT	.00	.00	.00	.00
100 SEED	WEIGHT	.00	.11	-.29+	.00
QUALITY	OF SEED	.00	.00	.00	.00
PERCENT	GERM.	.00	.00	.00	1.00

TABLE 99
EXPERIMENT 146
YEAR 1978

REGION - ASIA
SITE - LAHORE
LATITUDE - 31 DEG. 30 MIN. N
COOPERATORS - J.R. LOCKMAN, R.J. TROEDSON
DATE PLANTED - JUNE 7, 1978
SOIL TYPE - ALLUVIAL SILT LOAM
FERTILIZER USED (KG/HA) - N 20.0; P 22.0
AMOUNT OF MOISTURE - 337 MM
NUMBER OF IRRIGATIONS 3
COUNTRY - PAKISTAN
ELEVATION - 230 M
LONGITUDE - 74 DEG. 20 MIN. E
DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEULE ABOUND 1	NODEULE ABOUND 2	NODEULE ACT. 1	NODEULE ACT. 2	PLANT HEIGHT	LONGING
3	BOSSIER	406.22	60.75	147.25	.00	.00	.00	.00	.00	.00
4	WILLIAMS	401.02	36.25	127.50	.00	.00	.00	.00	.00	.00
12	FRANKLIN	395.40	36.25	127.50	.00	.00	.00	.00	.00	.00
14	MITCHELL	386.29	36.25	123.50	.00	.00	.00	.00	.00	.00
5	RANSOM	364.19	56.00	143.00	.00	.00	.00	.00	.00	.00
9	DAVIS	322.69	57.00	140.00	.00	.00	.00	.00	.00	.00
8	FORREST	310.41	46.50	135.00	.00	.00	.00	.00	.00	.00
16	CRAWFORD	295.75	42.00	130.25	.00	.00	.00	.00	.00	.00
11	CALLAND	287.75	34.00	128.50	.00	.00	.00	.00	.00	.00
15	BRAGG	251.09	56.50	147.75	.00	.00	.00	.00	.00	.00
10	GASOY 17	241.75	56.50	136.00	.00	.00	.00	.00	.00	.00
2	RILLITO	230.75	58.00	142.50	.00	.00	.00	.00	.00	.00
1	IMPROVED PELICAN	134.38	67.25	144.00	.00	.00	.00	.00	.00	.00
13	CUTLER 71	108.32	34.00	126.50	.00	.00	.00	.00	.00	.00
6	COBB	98.32	55.50	144.75	.00	.00	.00	.00	.00	.00
7	JAMES	46.77	41.00	127.50	.00	.00	.00	.00	.00	.00
GRAND MEAN		280.07	48.36	135.66	.00	.00	.00	.00	.00	.00
STANDARD ERROR OF A VARIETY MEAN		.64.55	.87	1.93	.00	.00	.00	.00	.00	.00
COEFFICIENT OF VARIATION		46.10%	3.60%	2.85%	.00%	.00%	.00%	.00%	.00%	.00%
LSD VARIETY MEANS (*****=NS)		183.87	2.48	5.51	.00	.00	.00	.00	.00	.00

TABLE 99 EXPERIMENT 146 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
3	BOSSIER	.00	142.25	27.55	.00	.00	2.00	.00	42.8	20.1
4	WILLIAMS	.00	117.25	19.95	.00	.00	4.50	.00	45.4	19.1
12	FRANKLIN	.00	132.25	19.30	.00	.00	5.00	.00	44.3	17.5
14	MITCHELL	.00	93.50	23.35	.00	.00	5.00	.00	43.4	18.6
5	RANSOM	.00	133.75	18.50	.00	.00	2.75	.00	44.8	16.5
9	DAVIS	.00	139.25	23.50	.00	.00	4.25	.00	44.3	15.9
8	FORREST	.00	107.25	16.75	.00	.00	3.75	.00	42.1	19.5
16	CRAWFORD	.00	79.25	19.10	.00	.00	3.75	.00	44.3	16.3
11	CALLAND	.00	135.25	14.48	.00	.00	5.00	.00	46.3	14.7
15	BRAGG	.00	125.75	23.05	.00	.00	3.00	.00	42.8	19.7
10	GASOY 17	.00	121.25	17.35	.00	.00	3.00	.00	41.3	18.4
2	RILLITO	.00	81.75	17.80	.00	.00	3.00	.00	43.3	18.0
1	IMPROVED FELICAN	.00	111.75	11.60	.00	.00	3.50	.00	45.4	16.3
13	CUTLER 71	.00	85.25	12.20	.00	.00	5.00	.00	44.7	18.0
6	COBB	.00	67.50	7.80	.00	.00	3.00	.00	47.9	14.7
7	JAMES	.00	115.25	4.75	.00	.00	4.75	.00	44.6	17.2
GRAND MEAN										
		.00	111.78	17.31	.00	.00	3.83	.00	.00	.00
STANDARD ERROR OF A VARIETY MEAN		.00	9.67	2.34	.00	.00	.22	.00	.00	.00
COEFFICIENT OF VARIATION		.00%	17.30%	26.98%	.00%	.00%	11.41%	.00%	.00%	.00%
5% LSD VARIETY MEANS (*****=NS)		.00	27.54	6.65	.00	.00	.62	.00	.00	.00
C O R R E L A T I O N S										
		(+ - PROB=.05	++ - PROB=.01)							
YIELD	KG/HA	.00	.35++	.65++	.00	.00	.19	.00	.00	.00
DAYS TO	FLOWER	.00	.08	.10	.00	.00	.76++	.00	.00	.00
DAYS TO	MATURITY	.00	.11	.10	.00	.00	.72++	.00	.00	.00
NODULE	ABUND 1	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE	ABUND 2	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE	ACT. 1	.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE	ACT. 2	.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANT	HEIGHT	.00	.00	.00	.00	.00	.00	.00	.00	.00
LODGING	SHATTER	1.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS	HARVEST	.00	1.00	.37++	.00	.00	.03	.00	.00	.00
PODS PER	PLANT	.00	.37++	1.00	.00	.00	.22	.00	.00	.00
POD	HEIGHT	.00	.00	.00	1.00	.00	.00	.00	.00	.00
100 SEED	WEIGHT	.00	.00	.00	.00	1.00	.00	.00	.00	.00
QUALITY	OF SEED	.00	-.03	-.22	.00	.00	1.00	.00	.00	.00
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	1.00	.00	.00

TABLE 100 EXPERIMENT 201 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
1	WILLIAMS	.00	142.25	15.45	.00	14.15	2.25	3.50	42.3	23.1
9	ELF	.00	144.25	13.65	.00	14.23	2.00	3.50	43.0	23.4
10	UNION	.00	119.25	19.95	.00	14.63	2.25	1.00	43.3	22.2
4	MITCHELL	.00	141.75	19.70	.00	14.08	3.50	2.00	43.0	20.4
2	FRANKLIN	.00	148.25	15.35	.00	12.68	5.00	.25	40.7	22.6
7	HARCOR	.00	120.75	24.48	.00	13.30	2.00	7.75	43.0	21.8
11	CORSOY	.00	125.50	14.15	.00	13.95	2.00	6.50	42.0	22.2
6	STEELE	.00	92.75	16.60	.00	14.70	2.50	2.50	42.1	22.8
3	CUTLER 71	.00	130.00	18.20	.00	13.43	3.75	1.75	44.1	22.6
5	ALTONA	.00	161.50	12.50	.00	14.35	2.00	5.75	42.1	20.6
8	HODGSON	.00	111.00	11.05	.00	15.08	2.75	2.00	42.4	23.4
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE AROUND 1										
NODULE AROUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
NODULE PLANT										
HEIGHT										
LODGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 101 EXPERIMENT 217 YEAR 1978

REGION - ASIA
 SITE - LAHORE
 LATITUDE - 31 DEG. 19 MIN. N
 COOPERATOR - J.R. LOCKMAN
 DATE PLANTED - MARCH 22, 1979
 SOIL TYPE - FINE SILT LOAM (ALLUVIAL)
 FERTILIZER USED (KG/HA) - N 25.0
 AMOUNT OF MOISTURE - 702 MM
 NUMBER OF IRRIGATIONS - 7 (350 MM)

COUNTRY - PAKISTAN
 ELEVATION - 225 M
 LONGITUDE - 74 DEG. 9 MIN. E
 DATE HARVESTED - JUNE, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	ABUND 1	ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
13	UNION	2610.07	35.00	96.00	2.00	.00	70.00	.00	43.27	.00
2	CALLAND	1605.68	33.00	107.00	2.67	.00	71.67	.00	40.33	.00
3	FRANKLIN	1560.40	37.67	107.00	4.00	.00	78.33	.00	49.27	.00
11	ELF	1272.05	33.00	91.00	2.33	.00	80.00	.00	17.60	.00
6	ALTONA	1200.65	31.00	76.00	3.67	.00	91.67	.00	30.07	.00
12	COLUMBUS	1170.65	35.00	123.00	3.00	.00	61.67	.00	50.53	.00
5	MITCHELL	1125.09	35.00	107.00	4.00	.00	88.33	.00	53.93	.00
1	WILLIAMS	959.94	33.67	96.33	2.67	.00	63.33	.00	40.13	.00
9	HARCOR	939.52	31.00	83.33	2.00	.00	85.00	.00	25.27	.00
10	HODGSON	835.07	31.00	83.67	2.33	.00	60.00	.00	24.00	.00
4	CUTLER 71	828.96	34.33	107.00	3.67	.00	66.67	.00	41.27	.00
14	CORSOY	809.93	31.00	86.33	2.67	.00	61.67	.00	21.53	.00
16	CRAWFORD	675.05	36.00	117.67	2.67	.00	73.33	.00	47.53	.00
7	SWIFT	608.10	33.00	76.00	3.33	.00	76.67	.00	23.20	.00
15	EVANS	601.16	31.00	83.67	3.00	.00	65.00	.00	20.67	.00
8	STEELE	445.59	31.00	83.67	3.67	.00	75.00	.00	23.80	.00
GRAND MEAN		1077.99	33.23	95.29	2.98	.00	73.02	.00	34.52	.00
STANDARD ERROR OF A VARIETY MEAN		287.80	.73	1.42	.43	.00	7.17	.00	2.13	.00
COEFFICIENT OF VARIATION		46.24%	3.80%	2.58%	25.17%	.00%	17.01%	.00%	10.67%	.00%
5% LSD VARIETY MEANS (*****=NS)		831.23	2.11	4.10	1.25	.00	*****	.00	6.14	.00
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.29+	.18	-.28	.00	.17	.00	.35+	.00
DAYS TO	FLOWER	.29+	1.00	.71++	.15	.00	-.07	.00	.74++	.00
DAYS TO	MATURITY	.18	.71++	1.00	.09	.00	-.15	.00	.80++	.00
NODULE	ABUND 1	-.28	.15	.09	1.00	.00	.16	.00	.17	.00
NODULE	ABUND 2	.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE	ACT. 1	.17	-.07	-.15	.16	.00	1.00	.00	.03	.00
NODULE	ACT. 2	.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANT	HEIGHT	.35+	.74++	.80++	.17	.00	.03	.00	1.00	.00
LODGING		.00	.00	.00	.00	.00	.00	.00	.00	.00
SHATTER		.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS	HARVEST	.63++	.09	-.04	-.39++	.00	.16	.00	.10	.00
PODS PER	PLANT	.20	.53++	.55++	.14	.00	-.04	.00	.72++	.00
POD	HEIGHT	.16	-.03	-.04	.13	.00	.08	.00	.25	.00
100 SEED	WEIGHT	.00	.00	.00	.00	.00	.00	.00	.00	.00
QUALITY	OF SEED	.00	.00	.00	.00	.00	.00	.00	.00	.00
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 101 EXPERIMENT 217 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
13	UNION	1.00	106.00	14.87	5.53	.00	.00	.00	42.6	23.8
2	CALLAND	1.00	104.00	20.00	5.80	.00	.00	.00	42.1	20.7
3	FRANKLIN	1.00	84.67	17.67	6.33	.00	.00	.00	41.1	23.2
11	ELF	1.00	89.00	9.40	3.60	.00	.00	.00	41.0	23.7
6	ALTONA	1.00	106.33	14.00	7.40	.00	.00	.00	39.3	21.3
12	COLUMBUS	1.00	77.67	16.27	5.87	.00	.00	.00	42.7	21.1
5	MITCHELL	1.00	57.33	22.13	5.07	.00	.00	.00	41.6	21.8
1	WILLIAMS	1.00	61.33	16.40	5.53	.00	.00	.00	40.6	25.7
9	HARCOR	1.00	88.00	9.80	4.73	.00	.00	.00	39.0	21.7
10	HODGSON	1.00	81.00	11.20	5.33	.00	.00	.00	40.7	24.5
4	CUTLER 71	1.00	31.33	19.00	6.07	.00	.00	.00	42.1	24.0
14	CORSOY	1.00	75.00	10.40	4.13	.00	.00	.00	41.8	22.5
16	CRAWFORD	1.00	82.33	16.60	3.87	.00	.00	.00	42.5	21.5
7	SWIFT	1.00	69.00	11.73	5.53	.00	.00	.00	38.7	24.4
15	EVANS	1.00	61.67	10.07	5.27	.00	.00	.00	40.7	22.6
8	STEELE	1.00	34.00	10.33	4.33	.00	.00	.00	41.5	23.2
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	.00	.63++	.20	.16	.00	.00	.00	.00	.00
DAYS TO FLOWER		.00	.09	.53++	-.03	.00	.00	.00	.00	.00
DAYS TO MATURITY		.00	-.04	.55++	-.04	.00	.00	.00	.00	.00
NODULE ABUND 1		.00	-.39++	.14	.13	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.16	-.04	.08	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANT HEIGHT		.00	.10	.72++	.25	.00	.00	.00	.00	.00
LOGGING		.00	.00	.00	.00	.00	.00	.00	.00	.00
SHATTER		1.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST		.00	1.00	.02	.09	.00	.00	.00	.00	.00
PODS PER PLANT		.00	.02	1.00	.15	.00	.00	.00	.00	.00
POD HEIGHT		.00	.09	.15	1.00	.00	.00	.00	.00	.00
100 SEED WEIGHT		.00	.00	.00	.00	1.00	.00	.00	.00	.00
QUALITY OF SEED		.00	.00	.00	.00	.00	1.00	.00	.00	.00
PERCENT GERM.		.00	.00	.00	.00	.00	.00	1.00	.00	.00

TABLE 102 EXPERIMENT 118 YEAR 1978

REGION - ASIA
 SITE - TANDOJAM
 LATITUDE - 25 DEG. 2 MIN N
 COOPERATORS - A. H. CHAUDHRY, M. A. JALEEL, N. AHMED & A. H. SOOMRO
 DATE PLANTED - JUNE 6, 1978
 SOIL TYPE - SANDY LOAM, PH 7.9
 FERTILIZER USED (KG/HA) - N 84.0, P 99.0
 AMOUNT OF MOISTURE - 344 MM
 NUMBER OF IRRIGATIONS - 4
 SUBSTITUTE VARIETY - HAMPTON 266A

COUNTRY - PAKISTAN

ELEVATION - 19 M

LONGITUDE - 63 DEG. 38 MIN E

DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
6	HAMPTON 266A	2821.40	41.00	114.75	.00	1.25	.00	.00	51.05	1.00
5	RANSOM	2738.05	35.75	107.75	.00	1.00	.00	.00	40.85	1.00
10	GASOY 17	2600.52	36.00	108.25	.00	2.75	.00	.00	41.00	1.00
15	BRAGG	2525.50	36.00	110.00	.00	3.25	.00	.00	42.40	1.00
3	BOSSIER	2412.98	37.50	112.25	.00	3.25	.00	.00	58.45	1.00
7	JAMES	2396.31	28.25	92.50	.00	2.75	.00	.00	59.45	1.00
1	IMPROVED PELICAN	2379.64	53.00	114.50	.00	3.00	.00	.00	119.20	1.75
2	RILLITO	2300.46	36.00	103.50	.00	2.00	.00	.00	80.55	1.00
9	DAVIS	2175.43	36.00	103.00	.00	1.25	.00	.00	46.40	1.00
11	CALLAND	2133.76	22.00	83.25	.00	2.75	.00	.00	61.20	1.00
16	COLUMBUS	2129.59	25.00	88.75	.00	1.00	.00	.00	54.45	1.00
8	FORREST	1971.23	31.00	98.00	.00	3.50	.00	.00	32.85	1.00
14	MITCHELL	1954.56	24.75	89.00	.00	2.00	.00	.00	56.35	1.00
4	WILLIAMS	1912.88	24.00	83.50	.00	3.25	.00	.00	54.05	1.00
13	CUTLER 71	1854.54	23.25	81.75	.00	1.75	.00	.00	54.10	1.75
12	FRANKLIN	1787.86	24.00	81.50	.00	2.75	.00	.00	52.15	1.00
GRAND MEAN		2255.92	32.09	98.27	.00	2.34	.00	.00	56.53	1.09
STANDARD ERROR OF A VARIETY MEAN		219.69	1.98	1.10	.00	.55	.00	.00	4.08	.13
COEFFICIENT OF VARIATION		19.48%	12.35%	2.23%	.00%	47.14%	.00%	.00%	14.42%	24.33%
5% LSD VARIETY MEANS (*****=NS)		625.77	5.65	3.13	.00	1.57	.00	.00	11.61	.38

CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA
1.00	.41++	.54++	.41++	.54++	.41++	.54++	.41++	.54++	.41++	.54++
.41++	1.00	.84++	.84++	.84++	.84++	.84++	.84++	.84++	.84++	.84++
.54++	.84++	1.00	.84++	.84++	.84++	.84++	.84++	.84++	.84++	.84++
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.09	-.05	.01	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.11	.43++	.16	.43++	.16	.43++	.16	.43++	.16	.43++	.16
.06	.18	.01	.18	.01	.18	.01	.18	.01	.18	.01
.22	.35++	.33++	.35++	.33++	.35++	.33++	.35++	.33++	.35++	.33++
.25+	.18	.16	.25+	.18	.25+	.18	.25+	.18	.25+	.18
.44++	.66++	.65++	.44++	.66++	.44++	.66++	.44++	.66++	.44++	.66++
.17	.52++	.37++	.17	.52++	.17	.52++	.17	.52++	.17	.52++
-.14	-.54++	-.47++	-.14	-.54++	-.14	-.54++	-.14	-.54++	-.14	-.54++
-.04	-.01	.07	-.04	-.01	.07	-.04	-.01	.07	-.04	-.01
.11	.09	.10	.11	.09	.10	.11	.09	.10	.11	.09

TABLE 102 EXPERIMENT 118 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
6	HAMPTON 266A	1.00	55.75	97.25	8.45	16.05	3.00	8.00
5	RANSOM	1.00	94.00	36.50	8.75	16.60	2.00	21.50
10	GASOY 17	1.75	89.75	66.00	8.13	13.88	1.75	27.75
15	BRAGG	1.00	80.50	49.75	7.65	13.23	2.00	23.75
3	BOSSIER	1.00	69.75	75.25	10.10	13.05	2.00	21.50
7	JAMES	1.00	93.75	43.75	9.80	16.33	2.00	25.00
1	IMPROVED PELICAN	1.50	99.75	83.00	14.90	11.58	2.00	26.75
2	RILLITO	1.00	97.25	67.00	12.70	12.00	2.00	31.75
9	DAVIS	1.00	98.50	48.00	10.40	16.13	1.75	33.25
11	CALLAND	1.00	129.00	42.25	7.55	17.63	3.00	30.00
16	COLUMBUS	1.00	83.25	40.75	8.65	14.68	2.00	25.75
8	FORREST	1.00	50.75	45.00	6.45	13.83	4.00	7.50
14	MITCHELL	1.00	67.25	43.75	6.60	16.05	2.75	12.00
4	WILLIAMS	1.00	112.00	41.00	6.35	15.80	1.00	14.75
13	CUTLER 71	1.00	98.25	34.00	8.95	17.53	2.00	21.50
12	FRANKLIN	1.00	98.25	39.75	7.45	15.03	1.75	17.25
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN								
COEFFICIENT OF VARIATION								
5% LSD VARIETY MEANS (*****=NS)								
C O R R E L A T I O N S								
(+ - PROB=.05 ++ - PROB=.01)								
YIELD	KG/HA	.22	.25+	.44++	.17	-.14	-.04	.11
DAYS TO FLOWER		.35++	-.18	.66++	.52++	-.54++	-.01	.09
DAYS TO MATURITY		.33++	-.30+	.65++	.37++	-.47++	.07	.10
NODULE ABUND 1		.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.14	.16	.08	-.04	-.23	.03	-.07
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00
PLANT	HEIGHT	.26+	.29+	.38++	.63++	-.37++	-.17	.22
LODGING		.26+	.25+	.15	.34++	-.04	-.07	.10
SHATTER		1.00	.08	.35++	.18	-.24	-.08	.28+
PLANTS	HARVEST	.08	1.00	-.14	.16	.17	-.44++	.36++
PODS PER	PLANT	.35++	-.14	1.00	.30+	-.34++	.11	.06
POD	HEIGHT	.18	.16	.30+	1.00	-.45++	-.21	.29+
100 SEED	WEIGHT	-.24	.17	-.34++	-.45++	1.00	.06	.04
QUALITY	OF SEED	-.08	-.44++	.11	-.21	.06	1.00	.29+
PERCENT	GERM.	.28+	.36++	.06	.29+	-.04	-.29+	1.00

TABLE 102a EXPERIMENT 173 YEAR 1978

REGION - ASIA
 SITE MAHA ILLUPPALLAMA
 LATITUDE - 8 DEG. N
 COOPERATOR F.W.S.M. SAMKRASINGHE
 DATE PLANTED - MAY 3, 1978
 SOIL TYPE - SANDY CLAY LOAM, PH 6.9
 FERTILIZER USED (KG/HA) - N 20.0, P 17.6, K 49.8
 AMOUNT OF MOISTURE - 130 MM
 NUMBER OF IRRIGATIONS - 10
 LOCAL VARIETIES - NUWARA ELIYA, PB-1

COUNTRY - SRI LANKA
 ELEVATION - 135 M
 LONGITUDE - 80 DEG. 28 MIN. E
 DATE HARVESTED - AUGUST, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NUCLE ABUND 1	NUCLE ABUND 2	NUCLE ACT. 1	NUCLE ACT. 2	PLANT HEIGHT	LOGGING
11	KAHALA	4471.77	21.75	99.75	.00	.00	.00	.00	36.20	1.00
14	WILLIAMS	4249.57	21.50	84.00	.00	.00	.00	.00	37.63	1.00
8	CARIBE	4110.70	21.50	88.00	.00	.00	.00	.00	53.05	1.00
4	HARDEE LS	3944.05	21.50	90.75	.00	.00	.00	.00	35.78	1.00
12	RILLITO	3888.50	23.00	91.75	.00	.00	.00	.00	34.25	1.00
1	CH-3	3666.30	17.50	83.25	.00	.00	.00	.00	48.28	1.00
6	IAC-2	3610.75	21.75	88.00	.00	.00	.00	.00	32.73	1.00
13	BOSSIER	3555.20	29.00	98.00	.00	.00	.00	.00	63.70	1.00
3	SJ-2	3499.65	22.25	89.00	.00	.00	.00	.00	34.75	1.00
5	ORBA	3416.32	23.00	83.25	.00	.00	.00	.00	37.20	1.00
16	PB-1	3388.55	28.00	92.00	.00	.00	.00	.00	59.43	1.00
7	TUNIA	3360.77	39.75	108.75	.00	.00	.00	.00	70.00	1.00
9	JUPITER	3249.67	20.00	78.00	.00	.00	.00	.00	45.10	1.00
10	IMPROVED PELICAN	3166.35	18.00	78.00	.00	.00	.00	.00	49.10	1.00
15	NUWARA ELIYA	3083.02	40.00	103.50	.00	.00	.00	.00	79.50	1.00
2	UFV-1	3027.47	17.75	76.25	.00	.00	.00	.00	46.68	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NUCLE ABUND 1										
NUCLE ABUND 2										
NUCLE ACT. 1										
NUCLE ACT. 2										
PLANT HEIGHT										
LOGGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
FOOD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERMIN.										

TABLE 102a

EXPERIMENT 173

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
11	KAHALA	1.00	297.75	31.75	.00	17.88	1.00	.00
14	WILLIAMS	1.00	302.25	30.25	.00	18.03	1.25	.00
8	CARIBE	1.00	297.25	34.75	.00	17.83	1.00	.00
4	HARDEE LS	1.00	227.50	27.75	.00	18.65	1.00	.00
12	RILLITO	1.00	273.75	22.50	.00	17.80	1.00	.00
1	CH-3	1.00	224.50	28.00	.00	12.10	1.00	.00
6	IAC-2	1.00	219.50	26.50	.00	10.95	1.00	.00
13	BOSSIER	1.00	276.50	33.25	.00	17.55	1.00	.00
3	SJ-2	1.00	187.75	39.25	.00	17.53	1.00	.00
5	ORBA	1.00	273.50	23.25	.00	16.60	1.00	.00
16	PB-1	1.00	288.25	38.75	.00	13.65	1.00	.00
7	TUNIA	1.00	292.00	29.00	.00	18.60	1.00	.00
9	JUPITER	1.00	273.00	21.75	.00	18.53	1.50	.00
10	IMPROVED PELICAN	1.00	291.00	23.50	.00	18.48	1.25	.00
15	NUMARA ELIYA	1.00	329.75	37.50	.00	17.93	1.00	.00
2	UFV-1	1.00	267.50	21.25	.00	18.35	1.00	.00
	GRAND MEAN	1.00	270.11	29.25	.00	16.90	1.06	.00
	STANDARD ERROR OF A VARIETY MEAN	.00	17.93	3.48	.00	.64	.11	.00
	COEFFICIENT OF VARIATION	.00%	13.27%	23.82%	.00%	7.60%	21.62%	.00%
	5% LSD VARIETY MEANS (*****=NS)	.00	51.06	9.92	.00	1.83	*****	.00

CORRELATIONS

(+ - PROB=.05)

(- - PROB=.01)

YIELD	KG/HA	.00	.13	.21	.00	-.02	-.15	.00
DAYS TO	FLOWER	.00	.32++	.32++	.00	.14	-.17	.00
DAYS TO	MATURITY	.00	.16	.37++	.00	.07	-.31+	.00
NODULE	ABUND 1	.00	.00	.00	.00	.00	.00	.00
NODULE	ABUND 2	.00	.00	.00	.00	.00	.00	.00
NODULE	ACT. 1	.00	.00	.00	.00	.00	.00	.00
NODULE	ACT. 2	.00	.00	.00	.00	.00	.00	.00
PLANT	HEIGHT	.00	.51++	.31+	.00	.12	.09	.00
LODGING	HEIGHT	.00	.00	.00	.00	.00	.00	.00
SHATTER	SHATTER	1.00	.00	.00	.00	.00	.00	.00
HARVEST	HARVEST	.00	1.00	.08	.00	.30+	.02	.00
PLANTS	PER PLANT	.00	.08	1.00	.00	-.15	-.11	.00
PODS PER	POD	.00	.00	.00	1.00	.00	.00	.00
100 SEED	WEIGHT	.00	.30+	.15	.00	1.00	.10	.00
QUALITY	OF SEED	.00	.02	.11	.00	.10	1.00	.00
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	1.00

TABLE 103 EXPERIMENT 43 YEAR 1978

REGION - ASIA
 SITE - SRISAMKONG
 LATITUDE - 17 DEG. 12 MIN. N
 COOPERATOR - ARWOOTH NALAMPANG
 DATE PLANTED - SEPTEMBER 6, 1978
 SOIL TYPE - KAMPAENGSAI SERIES, PH 7.0
 FERTILIZER USED (KG/HA) - N 18.8, P 25.0, K 31.0
 NUMBER OF IRRIGATIONS - 1
 COUNTRY - THAILAND
 ELEVATION - 56 M
 LONGITUDE - 99 DEG. 40 MIN. E
 DATE HARVESTED - DECEMBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
7	TUNIA	2646.78	35.00	80.25	.00	.00	.00	.00	58.50	1.00
5	ORBA	2605.10	35.25	71.75	.00	.00	.00	.00	75.35	2.00
13	WILLIAMS	2604.69	35.00	70.00	.00	.00	.00	.00	62.70	1.00
14	RILLITO	2563.43	35.50	76.00	.00	.00	.00	.00	58.80	2.00
15	COBB	2470.91	35.00	73.00	.00	.00	.00	.00	38.60	1.00
10	IMPROVED PELICAN	2450.49	35.00	77.00	.00	.00	.00	.00	61.85	3.50
3	SJ-2	2436.74	35.00	74.25	.00	.00	.00	.00	66.10	1.00
14	RANSOM	2434.24	35.00	72.50	.00	.00	.00	.00	35.33	1.00
12	BOSSIER	2402.56	35.25	77.75	.00	.00	.00	.00	61.95	3.75
6	IAC-2	2251.70	35.00	80.50	.00	.00	.00	.00	74.05	4.75
1	CH-3	2247.12	35.00	79.25	.00	.00	.00	.00	78.60	5.00
2	UFV-1	2188.77	35.25	79.50	.00	.00	.00	.00	38.85	1.00
16	GASOY 17	2091.67	35.00	70.75	.00	.00	.00	.00	32.95	1.00
4	HARDEE LS	1752.85	43.00	81.75	.00	.00	.00	.00	43.40	1.50
9	JUPITER	1507.38	40.00	86.25	.00	.00	.00	.00	60.05	1.50
8	CARIBE	1031.04	37.00	83.50	.00	.00	.00	.00	66.73	4.50
GRAND MEAN		2230.34	36.02	77.13	.00	.00	.00	.00	57.11	2.22
STANDARD ERROR OF A VARIETY MEAN		100.08	.33	1.03	.00	.00	.00	.00	3.59	.53
COEFFICIENT OF VARIATION		8.97%	1.81%	2.67%	.00%	.00%	.00%	.00%	12.59%	47.42%
5% LSD VARIETY MEANS (*****=NS)		285.08	.93	2.93	.00	.00	.00	.00	10.24	1.50

CORRELATIONS (+ - PROB=.05) ++ - PROB=.01)

YIELD	KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
1.00	1.00	-.56++	-.59++	.00	.00	.00	.00	.05	-.25+
-.56++	-.56++	1.00	.53++	.00	.00	.00	.00	-.13	-.08
-.59++	-.59++	.53++	1.00	.00	.00	.00	.00	.19	.41++
.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	1.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	1.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	1.00	.00	.00
.05	.05	-.13	.19	.00	.00	.00	.00	1.00	.47++
-.25+	-.25+	-.08	.41++	.00	.00	.00	.00	.47++	1.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.38++	.38++	-.54++	.00	.00	.00	.00	.00	-.08	.24
-.22	-.22	.17	.30+	.00	.00	.00	.00	.38++	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.67++	.67++	-.27+	-.43++	.00	.00	.00	.00	-.19	-.37++
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 103 EXPERIMENT 43 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
7	TUNIA	1.00	197.25	36.50	.00	11.25	.00	.00
5	ORBA	1.00	239.75	41.60	.00	10.25	.00	.00
13	WILLIAMS	1.00	264.75	32.00	.00	12.50	.00	.00
11	RILLITO	1.00	217.00	39.00	.00	10.25	.00	.00
15	COBB	1.00	283.75	30.35	.00	11.25	.00	.00
10	IMPROVED PELICAN	1.00	253.25	44.40	.00	9.75	.00	.00
3	SJ-2	1.00	221.50	68.50	.00	10.00	.00	.00
14	RANSOM	1.00	264.50	32.10	.00	11.00	.00	.00
12	ROSSIER	1.00	231.75	47.75	.00	10.25	.00	.00
6	IAC-2	1.00	225.25	41.95	.00	10.25	.00	.00
1	CH-3	1.00	185.50	45.35	.00	10.50	.00	.00
2	UFV-1	1.00	204.25	46.75	.00	10.25	.00	.00
16	GASOY 17	1.00	265.50	25.90	.00	11.00	.00	.00
4	HARDEE LS	1.00	153.00	51.25	.00	9.75	.00	.00
9	JUPITER	1.00	192.75	34.90	.00	10.25	.00	.00
8	CARIBE	1.00	224.50	55.85	.00	5.25	.00	.00

GRAND MEAN
STANDARD ERROR OF A VARIETY MEAN
COEFFICIENT OF VARIATION
5% LSD VARIETY MEANS (*****NS)

.00 226.52 42.13 .00 10.23 .00 .00
.00 15.70 3.52 .00 .41 .00 .00
.00% 13.86% 16.69% .00% 8.07% .00% .00%
.00 44.72 10.02 .00 1.18 .00 .00

C O R R E L A T I O N S

++ - PROB=.01)

(+ - PROB=.05

YIELD	KG/HA	.00	.38++	-.22	.00	.67++	.00
DAYS TO FLOWER		.00	-.54++	.17	.00	-.27+	.00
DAYS TO MATURITY		.00	-.54++	.30+	.00	-.43++	.00
NODULE ABUND 1		.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00
PLANT	HEIGHT	.00	-.08	.38++	.00	.19	.00
	LOGGING	.00	-.08	.24	.00	-.37++	.00
	SHATTER	1.00	.00	.00	.00	.00	.00
PLANTS	HARVEST	.00	1.00	-.34++	.00	.21	.00
PODS PER	PLANT	.00	-.34++	1.00	.00	-.44++	.00
POD	HEIGHT	.00	.00	.00	1.00	.00	.00
100 SEED	WEIGHT	.00	.21	-.44++	.00	1.00	.00
QUALITY	OF SEED	.00	.00	.00	.00	.00	.00
PERCENT	GERM.	.00	.00	.00	.00	.00	1.00

TABLE 104 EXPERIMENT 204 YEAR 1978

REGION - EUROPE COUNTRY - ITALY
 SITE - ROME ELEVATION - 42 M
 LATITUDE - 42 DEG. 2 MIN. N LONGITUDE - 12 DEG. 13 MIN. E
 COOPERATOR - GIOVANNI PORRECA
 DATE PLANTED - MAY 30, 1978 DATE HARVESTED - SEPTEMBER, 1978
 SOIL TYPE - SAND 87.0%, SILT 10.3%, CLAY 2.7%, PH 7.1
 FERTILIZER USED (KG/HA) - P 26.4, K 24.9
 AMOUNT OF MOISTURE - 432 MM
 NUMBER OF IRRIGATIONS - 7 (290 MM)

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODE ABUND 1	NODE ABUND 2	NODE ACT. 1	NODE ACT. 2	PLANT HEIGHT	LOGGING
16	CRAWFORD	3300.66	52.25	147.75	2.00	1.00	100.00	100.00	79.75	1.25
14	CORSOY	3140.21	40.25	123.75	2.00	1.00	100.00	97.50	89.50	1.00
10	HODGSON	3100.62	37.25	114.25	2.00	1.00	100.00	100.00	81.75	1.00
8	STEELE	2990.18	37.75	116.25	2.00	1.00	100.00	98.75	86.50	1.00
9	HARCOR	2977.68	41.75	121.25	2.00	1.00	100.00	96.25	90.75	1.00
7	SWIFT	2946.42	34.75	107.50	2.50	1.00	100.00	97.50	80.50	1.00
15	EVANS	2902.66	35.75	105.50	2.00	1.00	100.00	100.00	75.75	1.00
1	WILLIAMS	2842.23	44.50	130.75	2.00	1.00	100.00	98.75	95.00	1.00
3	FRANKLIN	2781.81	48.50	142.75	2.00	1.00	100.00	100.00	100.75	1.00
2	CALLAND	2704.71	45.75	133.50	2.00	1.00	100.00	98.75	106.75	1.00
5	MITCHELL	2517.17	49.75	139.25	2.00	1.00	100.00	100.00	103.75	1.25
11	ELF	2452.57	42.75	128.75	3.50	1.25	100.00	98.75	63.00	1.00
6	ALTONA	2394.23	31.75	97.50	2.00	1.00	100.00	96.25	59.00	1.00
12	COLUMBUS	2217.11	56.50	151.25	2.00	1.00	100.00	97.50	89.75	1.00
13	UNION	1981.65	46.25	144.25	2.00	1.25	100.00	98.75	84.00	1.00
4	CUTLER 71	1594.07	57.25	138.75	2.50	1.00	100.00	96.25	96.75	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		2677.75	43.92	127.69	2.16	1.03	100.00	98.44	86.45	1.03
COEFFICIENT OF VARIATION		6.98	.43	.26	.21	.09	.00	1.46	.99	.09
5% LSD VARIETY MEANS (*****=NS)		.52	1.95	.41	19.93	17.33	.00	2.97	2.28	17.33
		19.89	1.22	.74	.61	*****	.00	*****	2.81	*****

(+ - PROB=.05 ++ - PROB=.01)

CORRELATIONS

YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA
DAYS TO FLOWER	1.00	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++
DAYS TO MATURITY	-.47++	1.00	-.33++	1.00	-.33++	1.00	-.33++	1.00	-.33++	1.00
NODULE ABUND 1	-.33++	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++
NODULE ABUND 2	-.33++	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++
NODULE ACT. 1	-.33++	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++
NODULE ACT. 2	-.33++	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++
PLANT HEIGHT	-.33++	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++
LOGGING	-.33++	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++
SHATTER	-.33++	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++
HARVEST	-.33++	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++
PLANT HEIGHT	-.33++	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++
PODS PER 100 SEED	-.33++	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++
QUALITY OF SEED	-.33++	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++
PERCENT GERM.	-.33++	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++	1.00	-.47++

TABLE 104

EXPERIMENT 204

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
16	CRAWFORD	1.25	205.25	36.25	13.25	16.60	1.50	98.25	38.6	23.1
14	CORSOY	1.00	217.25	37.75	14.50	13.88	2.50	98.50	38.4	21.6
10	HODGSON	1.00	207.75	29.25	14.50	18.20	1.50	97.00	36.8	24.4
8	STEELE	1.00	205.25	28.50	12.00	17.13	2.00	99.75	39.4	18.2
9	HARCOR	1.00	196.75	36.25	14.25	14.65	2.00	98.75	38.7	20.6
7	SWIFT	1.00	199.75	29.75	13.25	17.35	2.00	95.00	37.8	22.5
15	EVANS	1.00	205.75	32.00	14.25	15.35	2.00	99.25	38.7	21.4
1	WILLIAMS	1.00	196.00	33.25	14.25	15.20	2.00	97.75	37.3	24.6
3	FRANKLIN	1.00	192.50	34.00	14.25	14.85	2.00	97.25	40.3	19.9
2	CALLAND	1.00	193.50	29.75	15.00	16.28	2.00	97.25	40.1	20.8
5	MITCHELL	1.00	198.25	24.25	14.50	18.88	1.50	98.50	41.7	19.7
11	ELF	1.00	270.75	18.75	11.25	16.75	2.00	97.00	40.9	19.7
6	ALTONA	2.25	221.75	23.25	9.00	17.25	2.00	99.00	38.8	22.6
12	COLUMBUS	1.00	228.75	20.00	13.75	16.50	2.00	97.25	41.4	21.6
13	UNION	1.00	240.00	17.50	13.25	15.80	2.25	98.75	43.5	19.0
4	CUTLER 71	1.00	251.25	17.25	15.25	14.28	2.00	97.50	43.1	19.5
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
NODULE PLANT										
LODGING										
SHATTER										
HARVEST										
PLANTS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										
YIELD										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
NODULE PLANT										
LODGING										
SHATTER										
HARVEST										
PLANTS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 105	EXPERIMENT 203	YEAR 1978
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REGION - EUROPE	COUNTRY - ITALY
SITE - CAGLIARI, SARDINIA	ELEVATION - 89 M
LATITUDE - 39 DEG. 25 MIN. N	LONGITUDE - 9 DEG. 5 MIN. E
COOPERATOR - PROF. MAURO DEIDDA	
DATE PLANTED - MAY 24, 1978	DATE HARVESTED - OCTOBER, 1978
SOIL TYPE - VERTISOL, SAND 41.1%, SILT 21.9%, CLAY 37.0%, PH 7.8	
FERTILIZER USED (KG/HA) - N 20.5, P 30.0	
AMOUNT OF MOISTURE - 546 MM	
NUMBER OF IRRIGATIONS 16 (400 MM)	

[illegible]

TABLE 105 EXPERIMENT 203 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
16	CRAWFORD	1.00	160.25	33.58	16.05	20.28	1.00	.00
4	CUTLER 71	1.00	168.00	24.80	12.80	22.23	2.50	.00
1	WILLIAMS	1.00	205.75	27.00	13.38	22.65	2.25	.00
12	COLUMBUS	1.00	195.25	20.80	20.25	18.70	1.50	.00
5	MITCHELL	1.00	194.00	29.08	18.20	21.33	3.25	.00
2	CALLAND	1.00	204.25	20.88	15.03	23.70	3.00	.00
11	ELF	1.00	217.25	32.53	11.63	19.90	4.00	.00
13	UNION	1.00	206.00	23.53	18.50	21.10	2.50	.00
6	ALTONA	1.00	189.75	7.23	10.18	22.08	2.00	.00
3	FRANKLIN	1.00	214.25	26.35	11.73	18.98	2.25	.00
9	HARCOR	1.00	212.75	23.10	9.15	18.98	4.00	.00
14	CORSOY	1.00	208.25	20.85	11.38	19.33	4.00	.00
8	STEELE	1.00	200.25	17.93	11.38	20.65	4.00	.00
10	HODGSON	1.00	213.25	21.70	10.28	21.95	4.00	.00
7	SWIFT	1.00	223.50	12.63	9.65	17.13	5.00	.00
15	EVANS	1.00	221.00	16.05	7.33	19.40	5.00	.00
	GRAND MEAN	1.00	202.11	22.37	12.93	20.52	3.14	.00
	STANDARD ERROR OF A VARIETY MEAN	.00	12.67	3.94	1.82	1.65	.29	.00
	COEFFICIENT OF VARIATION	.00%	12.54%	35.22%	28.19%	16.06%	18.28%	.00%
	5% LSD VARIETY MEANS (*****=NS)	.00	36.09	11.22	5.19	*****	.82	.00
C O R R E L A T I O N S								
		(+ - PROB=.05	++ - PROB=.01)					
YIELD	KG/HA	.00						
DAYS TO FLOWER		.00	-.24	.34++	.22	.69++	-.73++	.00
DAYS TO MATURITY		.00	-.30+	.57++	.57++	-.01	-.59++	.00
NODULE ABUND 1		.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00
PLANT		.00	.00	.00	.00	.00	.00	.00
LOGGING		.00	-.15	.29+	.53++	-.03	-.28+	.00
SHATTER		.00	.00	.00	.00	.00	.00	.00
HARVEST		1.00	.00	.00	.00	.00	.00	.00
PLANTS PER PLANT		.00	1.00	-.23	-.27+	-.09	.39++	.00
POD HEIGHT		.00	-.23	1.00	.10	.02	-.30+	.00
100 SEED WEIGHT		.00	-.27+	.02	1.00	-.15	-.36++	.00
QUALITY OF SEED		.00	-.09	.39++	-.15	1.00	-.31+	.00
PERCENT GERM.		.00	.00	-.30+	-.36++	-.31+	1.00	.00
		.00	.00	.00	.00	.00	.00	1.00

TABLE 106 EXPERIMENT 250 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
3	FRISKEY V	1.00	245.00	23.65	10.03	19.65	2.00	73.00	37.1	18.2
7	AJMA	1.00	195.00	12.10	14.35	17.93	3.00	65.75	38.9	17.0
2	ALTOONA	1.00	212.50	9.68	12.70	17.05	3.00	52.50	39.9	17.4
4	NORMAN	1.00	195.50	12.60	15.10	16.63	3.00	42.25	45.4	14.7
8	WARSZAWSKA	1.00	188.25	11.30	12.25	16.25	3.00	71.25	41.5	14.7
5	ADA	1.00	162.75	8.68	17.25	13.45	3.00	51.25	47.3	13.5
6	PORTAGE	1.00	192.50	6.90	18.40	14.70	4.00	22.75	42.4	14.3
1	ACME	1.00	181.00	7.58	16.65	15.70	4.00	22.75	44.2	13.7
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	.00	.75++	.87++	-.74++	.69++	-.81++	.68++		
DAYS TO FLOWER		.00	-.85++	-.60++	.72++	-.68++	.42+	-.29		
DAYS TO MATURITY		.00	-.69++	-.84++	.73++	-.69++	.68++	-.61++		
NODULE ABUND 1		.00	.18	.11	-.31	.20	-.18	.19		
NODULE ABUND 2		.00	.11	-.12	-.14	.30	0.00	.16		
NODULE ACT. 1		.00	-.12	.25	-.02	.09	-.17	.11		
NODULE ACT. 2		.00	-.23	-.03	.17	-.32	.02	-.11		
PLANT HEIGHT		.00	-.42+	-.61++	.76++	-.51++	.55++	-.67++		
LOGGING		.00	-.11	.06	-.18	-.06	-.18	.30		
SHATTER		1.00	.00	.00	.00	.00	.00	.00		
PLANTS HARVEST		.00	1.00	.69++	-.73++	.66++	-.56++	.37+		
PODS PER PLANT		.00	.69++	1.00	-.72++	.70++	-.82++	.63++		
POD HEIGHT		.00	-.73++	-.72++	1.00	-.69++	.77++	-.76++		
100 SEED WEIGHT		.00	.66++	.70++	-.69++	1.00	-.57++	.50++		
QUALITY OF SEED		.00	-.56++	-.82++	.77++	-.57++	1.00	-.86++		
PERCENT GERM.		.00	.37+	.63++	-.76++	.50++	-.86++	1.00		

TABLE 107 EXPERIMENT 101

YEAR 1978

REGION - EUROPE				COUNTRY - PORTUGAL						
SITE - AZORES				ELEVATION - 160 M						
SITE - VINHA BRAVA				ELEVATION - 160 M						
LATITUDE - 38 DEG.				LONGITUDE - 27 DEG.						
DATE PLANTED - MAY 22, 1978				DATE HARVESTED - OCTOBER, 1978						
FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9										
AMOUNT OF MOISTURE - 567.2 MM										
ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT, 1	NODULE ACT, 2	PLANT HEIGHT	LODGING
11	GASOY 17	3772.98	60.00	143.00	4.67	4.00	33.33	53.33	100.67	1.00
2	KAHALA	3717.41	87.67	166.33	4.67	5.00	31.67	.00	123.67	2.67
8	JAMES	3589.61	87.00	163.00	5.00	4.33	.00	63.33	127.67	3.00
16	BRAVO	3439.58	98.00	159.00	4.67	4.00	31.67	73.33	103.00	2.00
14	CUTLER 71	3311.77	74.67	154.67	5.00	4.33	.00	46.67	104.33	2.00
15	MITCHELL	3250.65	90.00	166.00	5.00	4.33	.00	23.33	128.33	3.33
10	DAVIS	3089.51	93.33	164.67	5.00	5.00	.00	.00	125.67	4.00
5	WILLIAMS	3033.94	63.67	136.67	5.00	4.00	.00	68.33	91.00	1.00
13	FRANKLIN	2889.47	68.67	147.67	4.67	4.00	31.67	58.33	115.67	1.33
12	CALLAND	2728.32	72.67	150.67	5.00	4.00	.00	88.33	112.67	1.00
6	RANSON	2600.52	87.00	167.00	5.00	4.00	.00	66.67	122.33	2.67
3	KILLITO	2589.41	88.00	165.00	5.00	4.33	.00	45.00	124.00	2.33
4	ROSSIER	2078.19	94.67	167.33	5.00	4.33	.00	51.67	120.67	3.33
7	COBB	1933.72	95.33	169.33	5.00	4.33	.00	50.00	136.67	2.67
9	FORREST	1911.49	97.00	167.00	5.00	4.33	.00	36.67	126.67	3.67
1	IMPROVED PELICAN	1680.89	116.00	175.67	5.00	4.67	.00	28.33	148.67	2.00
GRAND MEAN 2851.09 85.85 160.19 4.92 4.31 8.02 47.08 2.38										
STANDARD ERROR OF A VARIETY MEAN 358.76 .53 .44 .17 .28 16.43 20.55 .25										
COEFFICIENT OF VARIATION 21.79% 1.07% .48% 6.02% 11.17% 354.83% 75.60% 18.37%										
5% LSD VARIETY MEANS (*****=NS) 1036.18 1.53 1.27 ***** ***** ***** 11.79 .73										
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	- .44++	- .39++	- .41++	.12	.42++	- .20	- .35+	- .23
DAYS TO FLOWER	1.00	.91++	.15	.33+	.15	.33+	- .15	- .25	.70++	.59++
DAYS TO MATURITY	.91++	.15	.17	1.00	1.00	.37++	- .18	- .30+	.79++	.69++
NODULE ABUND 1	.41++	.12	.33+	.37++	.11	1.00	- 1.00++	- .86++	.14	.19
NODULE ABUND 2	.33+	.15	.33+	.37++	.11	1.00	.12	- .86++	.30+	.26
NODULE ACT. 1	.42++	.15	.33+	.37++	.11	1.00	.12	- .86++	.30+	.26
NODULE ACT. 2	.20	.25	.70++	.39++	.15	.33+	.15	- .20	- .14	- .19
PLANT HEIGHT	.35+	.23	.59++	.33+	.12	.37++	.15	- .26	- .26	- .25
LOGGING	.23	.38++	.38++	.33+	.12	.37++	.15	- .25	1.00	.52++
SHATTER	.41++	.20	.29+	.25	.05	.07	- .12	- .09	.52++	1.00
HARVEST	.20	.37++	.37++	.33+	.12	.37++	.15	- .09	.48++	- .05
PLANTS PER POD	.17	.05	.09	.07	.07	.09	.06	- .02	- .05	- .01
100 SEED WEIGHT	.54++	.82++	.82++	.74++	.23	.08	.23	.06	.44++	.60++
QUALITY OF SEED	.16	.20	.20	.14	.05	.18	.06	.06	- .16	- .14
PERCENT GERM.	.21	.26	.14	.14	.03	.27	- .03	- .19	- .63++	- .34+
									- .21	- .22

TABLE 107 EXPERIMENT 101 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
11	GASOY 17	1.00	204.67	25.33	12.00	29.17	3.67	68.00	40.3	19.2
2	KAHALA	1.00	166.33	37.33	17.00	23.93	3.33	66.00	44.7	18.1
8	JAMES	1.00	213.33	63.67	17.33	22.40	2.33	66.67	42.3	21.3
16	BRAGG	1.00	160.33	29.67	25.00	20.93	2.00	71.00	40.9	19.6
14	CUTLER 71	1.00	156.67	30.33	21.33	24.17	2.33	70.67	40.8	21.8
15	MITCHELL	1.00	195.00	45.67	14.67	22.77	3.33	44.00	39.5	22.9
10	DAVIS	1.00	190.00	35.67	14.67	21.83	4.00	65.67	42.5	18.5
5	WILLIAMS	1.00	213.00	23.67	20.00	25.80	3.00	55.00	41.8	20.7
13	FRANKLIN	1.33	199.33	31.67	22.33	26.87	3.00	72.00	40.5	20.3
12	CALLAND	1.00	181.67	31.33	21.33	22.23	2.00	64.33	40.0	21.3
6	RANSOM	1.00	212.67	39.33	23.67	22.93	3.00	45.33	42.5	21.6
3	RILLITO	1.00	146.67	39.33	29.00	18.23	1.67	52.00	43.9	18.9
4	BOSSIER	1.00	151.33	58.67	23.33	21.90	4.67	57.00	44.7	18.8
7	COBB	2.33	190.33	34.00	18.67	16.27	1.67	87.33	41.1	17.5
9	FORREST	1.00	212.67	41.33	12.67	21.23	4.00	77.00	34.8	20.6
1	IMPROVED PELICAN	2.00	157.33	36.67	13.67	14.03	1.00	95.33	45.5	16.3
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
NODULE PLANT										
LOGGING										
SHATTER										
HARVEST										
PLANTS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										
YIELD										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
NODULE PLANT										
LOGGING										
SHATTER										
HARVEST										
PLANTS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										
YIELD										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
NODULE PLANT										
LOGGING										
SHATTER										
HARVEST										
PLANTS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 108 EXPERIMENT 103 YEAR 1978

REGION - EUROPE
 SITE - S. MIGUEL - AZORES
 LATITUDE - 37 DEG. 45 MIN. N
 COOPERATOR - J. SOUSA DOURADO
 DATE PLANTED - APRIL 6, 1978
 SOIL PH - 6.2
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9
 AMOUNT OF MOISTURE - 311.6 MM

COUNTRY - PORTUGAL
 ELEVATION - 80 M
 LONGITUDE - 25 DEG. 40 MIN. W
 DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
11	GASOY 17	3379.84	73.50	178.00	3.25	1.00	95.00	100.00	100.75	2.00
14	CUTLER 71	2471.33	69.50	190.00	3.25	1.00	97.50	98.75	106.75	2.50
5	WILLIAMS	2415.07	80.00	188.00	3.25	1.00	97.50	95.00	109.75	2.00
13	FRANKLIN	2273.37	71.00	178.00	1.75	1.00	98.75	97.50	115.25	1.25
16	BRAGG	2240.03	70.25	190.00	4.25	1.00	77.50	97.50	126.75	1.25
12	CALLAND	2140.01	71.50	178.25	4.25	1.00	86.25	97.50	111.00	1.25
10	DAVIS	1985.81	110.50	229.75	4.50	1.75	65.00	97.50	98.50	2.50
1	IMPROVED FELICAN	1883.71	144.75	227.50	4.50	4.50	75.00	90.00	131.25	2.25
3	RILLITO	1777.44	107.25	218.00	3.50	2.75	77.50	97.50	134.00	3.00
8	JAMES	1681.59	104.75	224.00	4.75	2.00	66.25	81.25	114.00	2.75
4	BOSSIER	1569.06	112.00	231.25	2.75	1.50	83.75	78.75	104.75	2.25
15	MITCHELL	1479.46	106.75	230.75	4.00	2.50	61.25	96.25	104.75	2.75
7	COBB	1335.68	104.75	241.00	3.75	1.50	97.50	92.50	118.25	3.00
9	FORREST	1252.33	124.25	227.00	4.50	2.25	100.00	83.75	112.00	3.50
6	RANSOM	1100.22	101.00	227.00	2.75	1.00	93.75	77.50	94.25	1.75
2	KAHALA	977.28	104.50	224.25	1.75	1.00	82.50	86.25	112.75	4.50
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
(+ - PROB=.05 ++ - PROB=.01) (+ - PROB=.05 ++ - PROB=.01)										

CORRELATIONS

YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA	YIELD KG/HA
DAYS TO FLOWER	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DAYS TO MATURITY	-.45++	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NODULE ABUND 1	-.45++	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NODULE ABUND 2	-.45++	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NODULE ACT. 1	-.45++	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
NODULE ACT. 2	-.45++	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PLANT HEIGHT	-.45++	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LODGING	-.45++	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SHATTER	-.45++	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HARVEST	-.45++	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PLANT HEIGHT	-.45++	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PODS PER PLANT	-.45++	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
100 SEED WEIGHT	-.45++	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
QUALITY OF SEED	-.45++	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PERCENT GERM.	-.45++	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

TABLE 108 EXPERIMENT 103 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
11	GASOY 17	2.00	231.75	35.00	.00	19.75	1.50	.00	47.1	16.7
14	CUTLER 71	2.00	215.75	29.75	.00	17.75	3.50	.00	45.5	18.7
5	WILLIAMS	2.25	229.00	28.00	.00	18.25	3.00	.00	45.8	18.8
13	FRANKLIN	2.25	221.25	29.75	.00	21.75	2.00	.00	44.5	18.8
16	BRAEG	2.00	187.25	36.50	.00	16.75	2.50	.00	46.3	19.4
12	CALLAND	2.00	245.25	31.25	.00	19.75	1.75	.00	43.8	17.8
10	DAVIS	2.00	205.25	26.75	.00	20.25	2.50	.00	45.9	17.4
1	IMPROVED PELICAN	2.00	198.00	46.25	.00	15.00	3.75	.00	46.0	19.0
3	RILLITO	2.00	189.75	45.00	.00	16.00	4.50	.00	44.6	17.8
8	JAMES	2.25	203.00	30.25	.00	17.00	3.75	.00	46.4	17.7
4	BOSSIER	2.25	189.50	29.50	.00	19.25	4.75	.00	45.0	18.5
15	MITCHELL	2.25	196.00	26.25	.00	19.50	4.75	.00	45.1	19.0
7	COBB	2.50	208.25	33.00	.00	18.00	3.75	.00	45.6	18.5
9	FORREST	2.25	216.25	16.25	.00	19.25	4.25	.00	45.0	18.6
6	RANSOM	2.00	194.00	20.25	.00	19.50	5.00	.00	45.1	18.6
2	KAHALA	2.50	186.25	23.25	.00	19.75	4.75	.00	45.7	19.2
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS) *****										
C O R R E L A T I O N S										
(+ - PROB=.05 +- - PROB=.01)										
YIELD	KG/HA	-.27+	.37++	.29+	.00	.23	-.48++	.00		
DAYS TO FLOWER		.04	-.38++	.02	.00	-.23	.46++	.00		
DAYS TO MATURITY		.24	-.55++	-.12	.00	-.12	.59++	.00		
NODULE ABUND 1		-.15	-.00	.16	.00	-.34++	-.00	.00		
NODULE ABUND 2		.05	-.23	.20	.00	-.25+	.07	.00		
NODULE ACT. 1		-.05	.20	.06	.00	.11	.00	.00		
NODULE ACT. 2		-.07	.32+	.21	.00	-.04	-.41++	.00		
PLANT HEIGHT		.04	-.18	.50++	.00	-.33++	.18	.00		
LODGING		.26+	-.31+	-.11	.00	-.04	.55++	.00		
SHATTER		1.00	-.17	-.12	.00	.24	.03	.00		
HARVEST		-.17	1.00	-.12	.00	.09	-.39++	.00		
PLANTS PER PLANT		-.12	.00	1.00	.00	-.31+	-.08	.00		
PODS PER PLANT		.00	.00	.00	1.00	.00	.00	.00		
100 SEED WEIGHT		.24	.09	-.31+	.00	1.00	-.28+	.00		
QUALITY OF SEED		.03	-.39++	-.08	.00	-.28+	1.00	.00		
PERCENT GERM.		.00	.00	.00	.00	.00	.00	1.00		

TABLE 109 EXPERIMENT 104 YEAR 1978

REGION - EUROPE
 SITE - S. MIGUEL - AZORES
 LATITUDE - 37 DEG. 45 MIN. N
 COOPERATOR - J. SOUSA DOVRADO
 DATE PLANTED - MAY 11, 1978
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9
 SOIL PH - 6.2
 AMOUNT OF MOISTURE - 361 MM

COUNTRY - PORTUGAL
 ELEVATION - 80 M
 LONGITUDE - 25 DEG. 40 MIN. W
 DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	ABUND 1	ABUND 2	NOODLE ACT. 1	NOODLE ACT. 2	PLANT HEIGHT	LODGING
9	FORREST	2400.48	100.00	195.50	2.50	1.50	98.75	96.25	106.50	2.75
13	FRANKLIN	1804.55	58.50	157.50	3.50	1.00	100.00	100.00	113.75	1.25
3	RILLITO	1892.04	89.25	183.00	2.75	2.00	91.25	93.75	121.75	2.00
1	IMPROVED PELICAN	1867.04	112.50	198.25	3.50	5.00	100.00	81.25	137.00	2.25
14	CUTLER 71	1852.45	58.00	174.00	3.00	1.00	100.00	95.00	102.50	2.25
10	DAVIS	1817.03	95.75	206.00	4.00	1.50	100.00	88.75	107.00	2.00
15	MITCHELL	1810.78	90.00	202.00	4.25	2.75	98.75	88.75	108.00	2.25
4	BOSSIER	1742.01	97.00	201.25	2.75	1.75	100.00	95.00	112.50	3.25
7	CORB	1717.01	95.25	208.00	4.00	2.00	100.00	91.25	119.25	2.50
6	RANSOM	1573.23	84.50	201.25	2.75	2.00	100.00	93.75	112.00	3.00
12	CALLAND	1516.97	58.50	158.00	2.75	1.00	100.00	100.00	112.50	1.50
8	JAMES	1473.21	84.75	202.00	3.75	2.00	100.00	93.75	113.75	2.50
5	WILLIAMS	1462.79	66.25	161.50	2.00	1.00	95.00	100.00	97.75	1.25
11	GASOY 17	1360.69	50.00	163.00	3.00	1.00	97.50	100.00	106.00	2.25
16	BRAGG	1346.10	55.50	175.50	2.25	1.00	98.75	100.00	109.75	1.25
2	KAHALA	1231.50	82.00	179.50	2.00	1.00	85.00	91.25	115.25	2.25
GRAND MEAN		1685.49	79.86	185.39	3.05	1.72	97.81	94.30	112.20	2.16
STANDARD ERROR OF A VARIETY MEAN		250.69	4.25	3.34	.58	.41	3.04	3.35	3.53	.42
COEFFICIENT OF VARIATION		29.75%	10.64%	3.60%	38.24%	48.24%	6.23%	7.11%	5.94%	38.69%
5% LSD VARIETY MEANS (*****=NS)		*****	12.10	9.50	*****	1.18	*****	9.54	9.50	1.19

(+ - PROB=.05 ++ - PROB=.01)

C O R R E L A T I O N S

YIELD KG/HA	1.00	.19	.03	.19	.08	.31+	.25+
DAYS TO FLOWER	.19	1.00	.17	.75++	.03	.29+	.28+
DAYS TO MATURITY	.01	.75++	.17	1.00	.14	.40++	.40++
NOODLE ABUND 1	.03	.17	.27+	.27+	.06	.10	.12
NOODLE ABUND 2	.03	.57++	.42++	.36++	.17	.47++	.17
NOODLE ACT. 1	.19	.03	.14	.06	1.00	.02	.02
NOODLE ACT. 2	.08	.51++	.49++	.16	.11	.30+	.19
PLANT HEIGHT	.31+	.29+	.14	.14	.02	1.00	.35++
LODGING	.25+	.28+	.12	.40++	.02	.35++	1.00
SHATTER	.23	.16	.34++	.02	.05	.14	.05
HARVEST	.08	.04	.21	.06	.15	.33++	.24
PODS PER PLANT	.55++	.15	.05	.02	.02	.42++	.42++
POD HEIGHT	.00	.00	.00	.00	.00	.00	.00
100 SEED WEIGHT	.49++	.11	.13	.04	.01	.08	.23
QUALITY OF SEED	.26+	.63++	.38++	.16	.01	.41++	.15
PERCENT GERM.	.00	.00	.00	.00	.00	.00	.00

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
9	FORREST	2.00	203.50	29.25	.00	18.75	2.75	.00	45.2	18.6
13	FRANKLIN	2.00	202.00	33.75	.00	18.75	4.75	.00	43.6	18.1
3	RILLITO	2.25	201.25	34.00	.00	17.00	3.25	.00	48.0	18.3
1	IMPROVED PELICAN	2.00	184.25	49.75	.00	12.75	1.00	.00	45.5	18.2
14	CUTLER 71	2.00	199.00	44.25	.00	16.75	5.00	.00	44.1	18.9
10	DAVIS	2.50	214.25	30.00	.00	19.50	2.75	.00	46.5	17.8
15	MITCHELL	2.00	197.25	37.50	.00	20.25	3.25	.00	44.2	18.4
4	BOSSIER	2.25	197.25	41.00	.00	20.25	2.25	.00	47.3	19.4
7	COBB	2.00	216.50	21.75	.00	18.50	1.75	.00	43.5	19.6
6	RANSOM	2.50	185.00	27.25	.00	18.50	4.75	.00	46.4	20.1
12	CALLAND	2.00	215.75	22.50	.00	16.00	3.50	.00	42.7	18.2
8	JAMES	2.50	193.50	29.50	.00	15.75	4.75	.00	46.0	19.3
5	WILLIAMS	2.00	230.25	20.00	.00	17.75	5.00	.00	45.8	18.2
11	GASOY 17	2.00	207.00	30.50	.00	14.00	5.00	.00	45.1	17.9
16	BRAGG	2.00	179.75	31.00	.00	16.75	5.00	.00	45.8	17.7
2	KAHALA	2.25	191.75	30.00	.00	18.00	4.50	.00	46.1	17.7

STANDARD ERROR OF A VARIETY MEAN
COEFFICIENT OF VARIATION
5% LSD VARIETY MEANS (*****=NS)

C O R R E L A T I O N S

++ - PROB=.01)

(+ - PROB=.05

YIELD KG/HA

DAYS TO FLOWER	-.23	-.08	.55++	.00	.49++	-.26+	.00
DAYS TO MATURITY	.16	-.04	.15	.00	.11	-.63++	.00
NODULE ABUND 1	.34++	-.21	.05	.00	.13	-.38++	.00
NODULE ABUND 2	.02	.06	-.02	.00	-.04	-.16	.00
NODULE ACT. 1	-.13	-.15	.17	.00	-.21	-.45++	.00
NODULE ACT. 2	.05	.07	.02	.00	.01	.01	.00
PLANT	-.14	.12	-.38++	.00	.08	.33++	.00
LOGGING	-.14	-.33++	.42++	.00	-.05	-.41++	.00
SHATTER	-.05	-.24	.42++	.00	.23	-.15	.00
HARVEST	1.00	-.17	-.15	.00	-.04	.09	.00
PLANTS PER PLANT	-.15	1.00	1.00	.00	-.02	-.08	.00
POD HEIGHT	.00	-.38++	.00	.00	.19	-.18	.00
100 SEED WEIGHT	-.04	.00	.00	1.00	.00	.00	.00
QUALITY OF SEED	.09	-.02	.19	.00	1.00	-.12	.00
PERCENT GERM.	.00	-.08	-.18	.00	-.12	1.00	.00
		.00	.00	.00	.00	.00	1.00

TABLE 110 EXPERIMENT 102 YEAR 1978

REGION - EUROPE COUNTRY - PORTUGAL (AZORES)
 SITE - VINHA BRAVA ELEVATION - 160 M
 LATITUDE - 38 DEG. 40 MIN. N LONGITUDE - 27 DEG. 13 MIN. W
 COOPERATOR - LUIS DUTRA DATE HARVESTED - OCTOBER, 1978
 DATE PLANTED - APRIL 18, 1978 FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9
 AMOUNT OF MOISTURE - 648 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOADING
16	BRA66	3623.64	98.50	183.75	4.00	2.75	98.75	86.25	122.50	2.25
14	CUTLER 71	3388.18	94.25	179.25	4.00	2.00	100.00	83.75	111.00	3.50
5	WILLIAMS	2927.67	78.75	162.50	2.00	1.50	98.75	91.25	112.50	2.50
13	FRANKLIN	2746.38	84.00	176.25	3.50	2.50	100.00	88.75	114.25	3.50
11	GASOY 17	2729.71	76.25	167.75	4.00	2.25	100.00	83.75	108.25	3.75
12	CALLAND	2448.41	83.50	178.25	4.00	2.75	100.00	87.50	113.00	2.00
2	KAHALA	2379.64	105.25	190.50	4.00	4.00	98.75	46.25	128.25	4.50
3	RILLITO	2223.36	112.75	192.75	4.00	3.50	100.00	36.25	140.75	3.00
8	JAMES	2156.68	108.50	189.50	4.00	3.75	100.00	65.00	131.25	4.00
9	FORREST	1892.04	121.00	191.75	4.00	3.75	100.00	67.50	141.00	5.00
15	MITCHELL	1879.54	116.00	192.75	4.00	3.50	98.75	57.50	133.25	4.50
10	DAVIS	1729.51	119.00	189.75	4.00	3.25	98.75	68.75	129.75	4.50
7	COBB	1535.72	120.00	195.75	3.50	3.25	100.00	75.00	130.50	4.00
4	ROSSIER	1339.85	116.00	191.50	4.00	4.00	98.75	53.75	119.25	4.50
1	IMPROVED PELICAN	1258.58	142.50	205.50	4.00	3.75	97.50	67.50	153.00	3.75
6	RANSOM	1221.08	105.50	192.25	2.00	3.25	100.00	58.75	119.00	4.00
	GRAND MEAN	2217.50	105.11	186.23	3.69	3.11	99.38	69.84	125.47	3.70
	STANDARD ERROR OF A VARIETY MEAN	339.66	.44	.36	.18	.47	.99	5.74	3.31	.31
	COEFFICIENT OF VARIATION	30.63%	.84%	.38%	9.69%	30.45%	1.98%	16.42%	5.28%	16.70%
	5% LSD VARIETY MEANS (*****=NS)	967.50	1.25	1.02	.51	1.35	*****	16.34	9.43	.88

		C O R R E L A T I O N S		(+ - PROB=.05		++ - PROB=.01)	
YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA	YIELD	KG/HA
DAYS TO FLOWER	1.00	-54++	1.00	-54++	1.00	-54++	1.00
DAYS TO MATURITY	-.54++	1.00	-.54++	1.00	-.54++	1.00	-.54++
NODULE ABUND 1	.06	.28+	.94++	.30+	.57++	.30+	.57++
NODULE ABUND 2	-.28+	.51++	.30+	.38++	.38++	.38++	.38++
NODULE ACT. 1	.04	.18	.13	.03	.04	.03	.04
NODULE ACT. 2	.33++	-.50++	.80++	.75++	.39++	.05	.36++
PLANT HEIGHT	-.38++	.47++	.42++	.42++	.29+	.36++	.36++
LOADING	-.41++	.05	-.39++	-.52++	-.35++	-.35++	-.35++
SHATTER	.05	-.44++	.30+	.39++	.05	.39++	.39++
HARVEST	.14	-.20	-.14	-.14	-.14	-.14	-.14
PODS PER PLANT	-.20	.42++	.42++	.42++	.42++	.42++	.42++
FOOD HEIGHT	-.14	.42++	.42++	.42++	.42++	.42++	.42++
100 SEED WEIGHT	.42++	.42++	.42++	.42++	.42++	.42++	.42++
QUALITY OF SEED	-.36++	.14	.13	.13	.13	.13	.13
PERCENT GERM.	.15	-.16	-.14	-.14	-.14	-.14	-.14

TABLE 110

EXPERIMENT 102

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
16	BAGG	1.00	210.25	39.00	18.50	24.53	2.00	100.00	43.8	19.2
14	CUTLER 71	1.00	246.75	31.25	10.00	25.88	2.75	75.25	43.2	20.7
5	WILLIAMS	2.25	278.25	30.25	14.00	28.60	2.75	77.50	43.4	20.7
13	FRANKLIN	2.00	243.00	34.00	14.75	28.38	2.75	94.00	40.7	20.5
11	GASOY 17	1.75	261.50	28.75	11.25	26.30	4.25	60.50	42.4	18.7
12	CALLAND	1.50	259.50	27.25	14.00	23.28	2.75	86.50	41.9	20.2
2	KAHALA	1.00	191.50	50.50	24.25	25.20	3.75	71.00	44.1	18.9
3	RILLITO	1.00	197.25	56.50	24.25	22.15	3.25	52.50	43.6	20.7
8	JAMES	1.25	204.75	49.25	21.25	21.50	4.00	55.50	43.3	20.9
9	FORREST	1.75	229.25	37.00	12.50	24.83	5.00	65.75	42.1	19.6
15	MITCHELL	1.00	212.75	61.50	24.25	24.65	5.00	62.25	40.8	20.8
10	DAVIS	1.00	201.25	39.00	16.50	23.35	4.75	69.25	43.5	18.9
7	COBB	1.50	226.75	32.50	13.75	20.98	3.00	71.00	43.0	17.8
4	BOSSIER	1.75	225.50	34.50	18.25	19.58	4.25	75.75	45.1	19.3
1	IMPROVED PELICAN	1.00	230.25	35.50	18.00	17.10	1.75	84.75	45.6	16.9
6	RANSOM	1.00	221.00	51.50	13.00	23.23	4.75	66.25	44.1	22.7
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE AROUND 1										
NODULE AROUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
HEIGHT										
LONGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
FOOD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 111
EXPERIMENT 52
YEAR 1978

REGION - MESOAMERICA
SITE - TABOGA
LATITUDE - 10 DEG. N
COOPERATORS - RODRIGO ALFARO M. AND ADRIAN MORALES G.
DATE PLANTED - AUGUST 17, 1978
FERTILIZER USED (KG/HA) - N 30.0, P 39.6, K 24.9
COUNTRY - COSTA RICA
ELEVATION - 8 M
LONGITUDE - 84 DEG. W

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NOBUDE ABUND 1	NOBUDE ABUND 2	NOBUDE ACT. 1	NOBUDE ACT. 2	PLANT HEIGHT	LOGGING
9	JUPITER	2365.55	42.25	99.00	.00	.00	.00	.00	64.83	.00
12	BOSSIER	2362.85	41.00	95.25	.00	.00	.00	.00	73.18	.00
16	GASOY 17	2310.90	36.25	87.00	.00	.00	.00	.00	54.88	.00
2	UFV-1	2082.25	34.50	91.50	.00	.00	.00	.00	68.28	.00
4	HARDEE LS	2075.35	36.25	89.00	.00	.00	.00	.00	58.25	.00
1	CH-3	2041.55	43.00	90.25	.00	.00	.00	.00	84.00	.00
3	SJ-2	2004.95	35.25	88.50	.00	.00	.00	.00	51.65	.00
5	ORBA	1950.95	41.75	87.25	.00	.00	.00	.00	71.28	.00
10	IMPROVED PELICAN	1864.50	34.00	87.25	.00	.00	.00	.00	56.25	.00
13	WILLIAMS	1826.95	34.75	84.00	.00	.00	.00	.00	68.03	.00
11	RILLITO	1642.30	40.50	88.00	.00	.00	.00	.00	71.73	.00
8	CARIBE	1604.60	37.00	87.25	.00	.00	.00	.00	48.93	.00
14	RANSOM	1573.00	40.00	90.50	.00	.00	.00	.00	63.63	.00
17	TUNIA	1340.30	40.00	86.50	.00	.00	.00	.00	68.12	.00
6	IAC-2	1208.10	40.50	89.75	.00	.00	.00	.00	67.75	.00
15	COBB	1125.30	36.25	92.00	.00	.00	.00	.00	49.90	.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		1836.21	38.33	89.50	.00	.00	.00	.00	63.79	.00
COEFFICIENT OF VARIATION		326.00	3.67	3.43	.00	.00	.00	.00	11.19	.00
VARIETY MEANS (*****=NS)		35.51%	19.14%	7.67%	.00%	.00%	.00%	.00%	35.07%	.00%
LSD VARIETY MEANS (*****=NS)		*****	*****	*****	.00	.00	.00	.00	*****	.00

	CORRELATIONS	(+ - PROB=.05	++ - PROB=.01)	
YIELD	KG/HA			
DAYS TO FLOWER	1.00	.06	.00	.00
DAYS TO MATURITY	-.09	-.00	.00	.00
NODULE AROUND 1	.06	1.00	.00	.00
NODULE AROUND 2	.00	.00	1.00	.00
NODULE ACT. 1	.00	.00	.00	.00
NODULE ACT. 2	.00	.00	1.00	.00
NODULE PLANT	.22	.02	.00	.00
LOGGING	.00	-.14	.00	1.00
SHATTER	.00	.00	.00	.00
HARVEST	.29+	.00	.00	.00
PLANTS PER PLANT	.22	-.12	.00	.00
FODS PER HEIGHT	.07	-.10	.00	.20
100 SEED WEIGHT	.27+	.05	.00	.56++
QUALITY OF SEED	-.19	.03	.00	-.10
GERM. PERCENT	.00	.20	.00	.16
		.00	.00	.00

TABLE III EXPERIMENT 52 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
9	JUPITER	.00	78.50	93.50	11.48	17.90	2.75	.00
12	BOSSIER	.00	75.00	76.00	12.30	17.20	4.00	.00
16	GASOY 17	.00	80.75	77.50	10.68	16.90	4.00	.00
2	UFV-1	.00	78.25	87.25	10.23	15.88	2.25	.00
4	HARDEE LS	.00	83.75	75.25	11.05	14.48	3.00	.00
1	CH-3	.00	69.00	73.75	13.93	13.93	3.00	.00
3	SJ-2	.00	76.00	87.00	11.55	13.20	1.75	.00
5	OREA	.00	71.75	81.50	15.38	15.80	2.50	.00
10	IMPROVED PELICAN	.00	84.00	79.00	11.60	13.48	2.00	.00
13	WILLIAMS	.00	86.25	82.25	10.63	16.78	2.25	.00
11	RILLITO	.00	81.50	82.50	11.88	15.58	2.50	.00
8	CARIBE	.00	70.50	61.75	9.98	9.80	3.00	.00
14	RANSOM	.00	77.00	60.00	10.70	14.63	4.00	.00
7	TUNIA	.00	76.75	90.75	10.50	17.05	2.75	.00
6	IAC-2	.00	82.75	57.50	13.63	13.63	3.25	.00
15	COBB	.00	62.75	49.50	10.28	14.80	4.75	.00
	GRAND MEAN	.00	77.16	75.94	11.61	15.06	2.98	.00
	STANDARD ERROR OF A VARIETY MEAN	.00	6.29	8.82	1.35	1.78	.48	.00
	COEFFICIENT OF VARIATION	.00%	16.31%	23.22%	23.19%	23.63%	32.50%	.00%
	5% LSD VARIETY MEANS (*****=NS)	.00	*****	25.12	*****	*****	1.38	.00
C O R R E L A T I O N S								
			(+ - PROB=.05	++ - PROB=.01)				
YIELD	KG/HA	.00	.29+	.22	.07	.27+	-.19	.00
DAYS TO FLOWER		.00	-.14	.02	.05	-.05	.18	.00
DAYS TO MATURITY		.00	-.12	-.10	-.08	.03	.20	.00
NODULE ABUND 1		.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00
NODULE PLANT		.00	.20	-.00	.56++	-.10	.16	.00
LODGING		.00	.00	.00	.00	.00	.00	.00
SHATTER		1.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST		.00	1.00	.32++	-.04	.03	-.34++	.00
PODS PER PLANT		.00	.32++	1.00	.00	.28+	-.35++	.00
FOU HEIGHT		.00	-.04	.00	1.00	-.01	.10	.00
100 SEED WEIGHT		.00	.03	.28+	-.01	1.00	-.11	.00
QUALITY OF SEED		.00	-.34++	-.35++	.10	-.11	1.00	.00
PERCENT GERM.		.00	.00	.00	.00	.00	.00	1.00

TABLE 112 EXPERIMENT 29 YEAR 1978

REGION - MESOAMERICA
 SITE - SAN JOSE DE OCOA
 LATITUDE - 18 DEG. 40 MIN. N
 COOPERATOR - CHRISTIAN SCHWITZKE
 DATE PLANTED - JULY 6, 1978
 SOIL TYPE - SAND 60%, SILT 10%, CLAY 30%, PH 4.8
 FERTILIZER USED (KG/HA) - N 25.0, P 26.4, K 24.9
 AMOUNT OF MOISTURE - 175.4 MM
 NUMBER OF IRRIGATIONS - 6 (300 MM)

COUNTRY - DOMINICAN REPUBLIC
 ELEVATION - 1000 M
 LONGITUDE - 70 DEG. 35 MIN. W

DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
13	WILLIAMS	3867.44	.00	135.00	2.75	3.50	100.00	.00	59.50	1.00
2	UFV-1	3696.57	.00	182.00	2.75	3.00	100.00	.00	99.25	1.50
11	RILLITO	3471.53	.00	144.00	4.00	4.25	100.00	.00	73.25	1.00
14	RANSOM	3359.00	.00	161.00	2.00	2.75	100.00	.00	65.25	1.00
15	COBB	3265.24	.00	161.00	3.75	4.00	100.00	.00	93.25	2.25
10	IMPROVED PELICAN	3146.46	.00	171.50	3.75	4.00	100.00	.00	118.50	3.00
8	CARIBE	2904.75	.00	164.00	2.75	3.50	100.00	.00	129.00	1.00
12	BOSSIER	2708.87	.00	174.00	2.50	3.25	100.00	.00	79.25	2.00
6	IAC-2	2667.20	.00	182.00	3.00	3.75	100.00	.00	126.75	1.75
7	TUNIA	2146.26	.00	182.00	3.25	3.50	100.00	.00	94.50	2.00
1	CH-3	2085.83	.00	198.00	2.75	3.25	100.00	.00	149.00	2.50
3	SJ-2	1917.05	.00	196.00	4.00	4.25	100.00	.00	134.50	2.50
9	JUPITER	1750.35	.00	203.00	3.50	4.00	100.00	.00	124.25	2.75
5	ORBA	1646.16	.00	182.00	3.50	4.25	100.00	.00	149.00	3.25
4	HARDEE LS	1544.06	.00	205.00	3.50	4.50	100.00	.00	112.00	2.25
GRAND MEAN 2678.45										
STANDARD ERROR OF A VARIETY MEAN 205.79										
COEFFICIENT OF VARIATION 15.37%										
5% LSD VARIETY MEANS (*****=NS) 587.32										
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00								
DAYS TO FLOWER		.00								
DAYS TO MATURITY		1.00								
NODULE ABUND 1		-.76++								
NODULE ABUND 2		-.11								
NODULE ACT. 1		.00								
NODULE ACT. 2		.00								
PLANT HEIGHT		.00								
LODGING		.00								
SHATTER		.00								
HARVEST		.00								
PODS PER PLANT		.00								
HEIGHT		.00								
POD		.00								
100 SEED WEIGHT		.00								
QUALITY OF SEED		.00								
PERCENT		.00								

TABLE 112

EXPERIMENT 29

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
13	WILLIAMS	1.00	338.00	20.25	11.00	21.00	2.00	97.00	42.8	16.1
2	UFV-1	1.00	218.25	43.50	19.50	23.00	3.00	96.00	45.5	17.2
11	RILLITO	1.00	219.25	29.00	10.50	20.00	4.00	94.00	42.6	16.2
14	RANSON	1.00	297.75	22.00	10.75	21.75	5.00	99.00	42.4	18.5
15	COBB	2.00	294.75	35.50	20.50	20.00	4.00	97.00	41.7	17.4
10	IMPROVED PELICAN	1.00	203.00	63.25	14.00	18.00	4.00	98.00	45.4	16.4
8	CARIBE	1.00	233.50	64.75	12.00	18.00	2.00	90.00	48.1	14.2
12	BOSSIER	1.00	212.75	31.00	12.50	21.00	5.00	93.00	44.2	18.7
6	IAC-2	1.00	235.50	37.00	16.00	20.00	3.00	94.00	43.7	16.4
7	TUNIA	1.00	234.50	34.00	17.00	23.00	4.00	96.00	44.2	17.3
1	CH-3	1.00	204.50	75.00	13.75	19.00	4.00	98.00	44.7	16.6
9	SJ-2	1.00	213.00	62.50	14.75	19.00	4.00	95.00	45.7	15.8
3	JUPITER	1.00	156.75	53.25	14.50	21.00	4.00	96.00	46.2	15.4
5	ORBA	1.00	222.50	50.75	11.25	18.00	5.00	98.00	43.2	15.4
4	HARDEE LS	1.00	210.50	39.25	13.75	20.00	3.00	97.00	44.3	14.3
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
NODULE PLANT										
LODGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										
YIELD										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
NODULE PLANT										
LODGING										
SHATTER										
PLANTS HARVEST										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 113 EXPERIMENT 119 YEAR 1978

REGION - MESOAMERICA
 SITE - CHIMALTENANGO
 LATITUDE - 14 DEG. 39 MIN. N
 COOPERATOR - DARRYL JORDAN
 DATE PLANTED - JUNE 5, 1978
 SOIL TYPE - CLAY 60%, VOLCANIC ASH 40%, PH 6.2
 FERTILIZER USED (KG/HA) - N 16.0, P 20.0, K 0.0
 AMOUNT OF MOISTURE - 849 MM

COUNTRY - GUATEMALA
 ELEVATION - 1800 M
 LONGITUDE - 90 DEG. 49 MIN. W

DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
6	DAVIS	2704.71	67.75	182.50	3.75	1.25	100.00	92.50	61.75	.00
3	COBB	2332.97	61.50	158.25	4.00	1.00	100.00	87.50	50.00	.00
2	BOSSIER	2256.70	59.50	159.50	4.25	1.00	100.00	85.00	64.00	.00
5	FORREST	2113.76	56.00	168.00	3.75	1.00	100.00	90.00	62.75	.00
7	GASDY 17	1619.07	58.75	171.75	4.00	1.50	96.25	91.25	44.25	.00
4	JAMES	1604.49	53.00	148.00	4.00	1.00	100.00	83.75	39.75	.00
10	MITCHELL	1514.89	44.75	145.00	4.00	1.25	95.00	86.25	38.00	.00
11	BRAAG	1208.57	59.50	178.25	4.00	1.25	98.75	87.50	60.25	.00
8	CALLAND	952.27	47.25	148.00	4.00	1.25	100.00	83.75	24.00	.00
1	IMPROVED PELICAN	939.77	94.50	182.50	4.00	1.00	100.00	90.00	81.00	.00
9	FRANKLIN	539.69	44.00	148.00	4.00	1.50	100.00	76.25	37.00	.00
	GRAND MEAN	1616.99	58.77	162.70	3.98	1.18	99.09	86.70	51.16	.00
	STANDARD ERROR OF A VARIETY MEAN	245.61	2.51	5.97	.18	.17	1.85	6.47	4.73	.00
	COEFFICIENT OF VARIATION	30.38%	8.54%	7.34%	9.18%	28.33%	3.73%	14.94%	18.49%	.00%
	5% LSD VARIETY MEANS (*****=NS)	709.37	7.25	17.25	*****	*****	*****	*****	13.66	.00

CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	1.00	.11	.17	-.07	-.25	.02	.04	.27	.00
DAYS TO FLOWER	.11	1.00	.62++	-.05	-.17	-.01	.15	.70++	.00
DAYS TO MATURITY	.17	.62++	1.00	-.23	-.11	-.05	.17	.54++	.00
NODULE ABUND 1	-.07	-.05	-.23	1.00	.03	-.02	-.05	-.09	.00
NODULE ABUND 2	-.25	-.17	-.11	.03	1.00	.11	-.09	-.24	.00
NODULE ACT. 1	.02	-.01	-.05	-.02	.11	1.00	.10	.03	.00
NODULE ACT. 2	.04	.02	.17	-.05	-.09	.10	1.00	.12	.00
PLANT HEIGHT	.27	.15	.54++	-.09	-.24	.03	.12	1.00	.00
LODGING	.00	.00	.00	.00	.00	.00	.00	.00	1.00
PLANTS SHATTER	.00	.00	.00	.00	.00	.00	.00	.00	.00
PODS PER PLANT	.10	.19	.25	.18	.13	-.12	.08	.09	.00
POD HEIGHT	.63++	.33+	.32+	.03	-.10	.10	.22	.54++	.00
100 SEED WEIGHT	.09	.25	.01	.13	-.28	-.01	.24	.22	.00
QUALITY OF SEED	.38++	-.27	.31+	-.09	-.02	-.11	.07	-.02	.00
PERCENT GERM.	-.59++	-.62++	-.55++	.06	.22	-.06	-.28	-.66++	.00
	.11	.21	-.00	-.08	.03	.02	-.11	.25	.00

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
6	DAVIS	.00	277.00	19.50	8.75	21.05	1.00	88.75	44.0	17.6
3	COBB	.00	269.50	17.00	13.00	18.38	1.00	96.25	43.8	18.3
2	BOSSIER	.00	262.75	21.50	10.75	18.55	1.00	86.25	45.4	17.6
5	FORREST	.00	250.75	21.00	10.00	19.50	1.00	95.75	45.0	17.7
7	GASOY 17	.00	280.00	15.00	8.75	19.60	1.00	94.75	44.5	16.9
4	JAMES	.00	276.25	11.25	7.50	19.08	3.00	96.50	45.3	18.0
10	MITCHELL	.00	264.00	13.75	7.00	18.55	4.00	93.75		
11	BRAGG	.00	280.00	12.00	9.25	22.58	3.00	90.00	45.8	17.0
8	CALLAND	.00	239.75	10.75	8.75	17.88	5.00	78.50		
1	IMPROVED PELICAN	.00	271.50	17.25	11.75	14.25	1.00	95.25	46.6	16.2
9	FRANKLIN	.00	248.75	6.00	8.75	16.18	5.00	90.75		
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		.00	265.48	15.00	9.48	18.69	2.36	91.50		
COEFFICIENT OF VARIATION		.00	19.11	2.66	1.58	.69	.00	3.47		
5% LSD VARIETY MEANS (*****=NS)		.00%	14.40%	35.53%	33.32%	7.41%	.00%	7.58%		
		.00	*****	7.70	*****	2.00	.00	10.01		
C O R R E L A T I O N S										
		(+ - PROB=.05			++ - PROB=.01)					
YIELD	KG/HA	.00	.10	.63++	.09	.38++	-.59++	.11		
DAYS TO FLOWER		.00	.19	.33+	.25	-.27	-.62++	.21		
DAYS TO MATURITY		.00	.25	.32+	.01	.31+	-.55++	-.00		
NODULE ABUND 1		.00	.18	.03	.13	-.09	.06	-.08		
NODULE ABUND 2		.00	.13	-.10	-.28	-.02	.22	.03		
NODULE ACT. 1		.00	-.12	.10	-.01	-.11	-.06	.02		
NODULE ACT. 2		.00	.08	.22	.24	.07	-.28	-.11		
PLANT HEIGHT		.00	.09	.54++	.22	-.02	-.66++	.25		
LOGGING		.00	.00	.00	.00	.00	.00	.00		
SHATTER		1.00	.00	.00	.00	.00	.00	.00		
PLANTS HARVEST		.00	1.00	.00	-.09	.23	.20	-.06		
PODS PER PLANT		.00	-.06	1.00	.13	.08	-.62++	.07		
POD HEIGHT		.00	-.09	.13	1.00	-.14	-.29	-.19		
100 SEED WEIGHT		.00	.23	.08	-.14	1.00	-.12	-.16		
QUALITY OF SEED		.00	-.20	-.62++	-.29	-.12	1.00	-.29		
PERCENT GERM.		.00	-.06	.07	-.19	-.16	-.29	1.00		

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TABLE 114
EXPERIMENT 72
YEAR 1978

REGION -- MESOAMERICA
SITE -- GUARUMA 2
LATITUDE -- 15 DEG. 22 MIN. N
COOPERATOR -- JULIO ROMERO
DATE PLANTED -- NOVEMBER 9, 1978
AMOUNT OF MOISTURE -- 415 MM
LOCAL VARIETIES -- SIATSA 31, SIATSA 194
COUNTRY -- HONDURAS
ELEVATION -- 36 M
LONGITUDE -- 87 DEG.
DATE HARVESTED -- FEBRUARY 1979

TABLE 114 EXPERIMENT 72 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
15	SIATSA-194	.00	227.75	.00	19.00	22.40	.00	.00
14	SIATSA-31	.00	293.25	.00	14.00	21.35	.00	.00
12	ROSSIEP	.00	202.75	.00	10.75	21.00	.00	.00
7	TUNIA	.00	178.50	.00	8.50	23.25	.00	.00
8	CARIBE	.00	169.25	.00	12.00	15.90	.00	.00
10	IMPROVED PELICAN	.00	214.00	.00	10.50	17.20	.00	.00
1	CH-3	.00	175.25	.00	11.00	18.33	.00	.00
4	HARVEE I.S	.00	111.50	.00	10.50	19.48	.00	.00
6	IAC-2	.00	164.50	.00	11.50	18.55	.00	.00
9	JUPITER	.00	152.00	.00	11.50	23.33	.00	.00
13	WILLIAMS	.00	224.25	.00	7.75	21.43	.00	.00
11	RILLITO	.00	160.25	.00	7.25	18.60	.00	.00
3	SJ-2	.00	158.50	.00	12.00	15.83	.00	.00
5	ORBA	.00	167.75	.00	9.00	15.03	.00	.00
16	GASDY 17	.00	242.00	.00	.00	19.58	.00	.00
2	UFU-1	.00	90.00	.00	.50	19.83	.00	.00
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN		.00	183.22	.00	9.73	19.44	.00	.00
COEFFICIENT OF VARIATION		.00%	15.26	.00	.78	.31	.00	.00
5% LSD VARIETY MEANS (*****=NS)		.00	43.46	.00	16.06%	3.20%	.00%	.00%
C O R R E L A T I O N S								
		(+ - PROB=.05		++ - PROB=.01)				
YIELD	KG/HA	.00	.34++	.00	.70++	.31+	.00	.00
DAYS TO FLOWER		.00	-.21	.00	.51++	-.10	.00	.00
DAYS TO MATURITY		.00	-.46++	.00	-.05	.08	.00	.00
NODULE ABUND 1		.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00
NODULE PLANT		.00	.19	.00	.86++	.09	.00	.00
LODGING		.00	.09	.00	.65++	.06	.00	.00
SHATTER		1.00	.00	.00	.00	.00	.00	.00
PLANTS HARVEST		.00	1.00	.00	.20	.17	.00	.00
PODS PER PLANT		.00	.00	1.00	.00	.00	.00	.00
POD HEIGHT		.00	.20	.00	1.00	.08	.00	.00
100 SEED WEIGHT		.00	.17	.00	.08	1.00	.00	.00
QUALITY OF SEED		.00	.00	.00	.00	.00	1.00	.00
PERCENT GERM.		.00	.00	.00	.00	.00	.00	1.00

TABLE 115 EXPERIMENT 127 YEAR 1978

REGION - MIDDLE EAST COUNTRY - IRAN
 SITE - GORGAN ELEVATION - 120 M
 LATITUDE - 36 DEG. 51 MIN. N LONGITUDE - 54 DEG. 28 MIN. E
 COOPERATORS - H. POURDAVAI, A. SHARIATI AND L. VULIC
 DATE PLANTED - APRIL 27, 1978 DATE HARVESTED - SEPTEMBER, 1978
 SOIL PH - 7-8
 FERTILIZER USED (KG/HA) - N 36.0, P 92.0, K 25.0
 NUMBER OF IRRIGATIONS - 3
 SUBSTITUTE VARIETIES - DARE, HILL

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
14	MITCHELL	4435.00	38.00	134.25	.00	.00	.00	.00	83.00	.00
11	CALLAND	4120.00	33.00	135.00	.00	.00	.00	.00	76.25	.00
3	BOSSIER	3975.00	80.00	185.00	.00	.00	.00	.00	83.50	.00
16	COLUMBUS	3935.00	33.00	135.00	.00	.00	.00	.00	92.00	.00
4	WILLIAMS	3925.00	33.00	135.00	.00	.00	.00	.00	74.00	.00
5	RANSOM	3880.00	72.00	186.00	.00	.00	.00	.00	85.00	.00
12	FRANKLIN	3485.00	33.00	122.00	.00	.00	.00	.00	87.50	.00
13	CUTLER 71	3320.00	33.00	135.00	.00	.00	.00	.00	89.75	.00
9	DAVIS	3235.00	80.00	186.00	.00	.00	.00	.00	87.25	.00
10	GASOY 71	3160.00	90.00	185.00	.00	.00	.00	.00	82.75	.00
7	JAMES	3145.00	69.00	135.00	.00	.00	.00	.00	91.00	.00
15	HILL	3100.00	69.00	135.00	.00	.00	.00	.00	81.75	.00
6	DARE	2950.00	61.00	144.00	.00	.00	.00	.00	78.50	.00
1	IMPROVED PELICAN	2880.00	108.00	188.00	.00	.00	.00	.00	86.75	.00
8	FORREST	2670.00	65.00	135.00	.00	.00	.00	.00	87.25	.00
2	RILLITO	2425.00	72.00	185.00	.00	.00	.00	.00	75.75	.00
	GRAND MEAN	3415.00	60.56	153.77	.00	.00	.00	.00	83.88	.00
	STANDARD ERROR OF A VARIETY MEAN	278.29	.00	.19	.00	.00	.00	.00	1.41	.00
	COEFFICIENT OF VARIATION	16.30%	.00%	.24%	.00%	.00%	.00%	.00%	3.57%	.00%
	5% LSD VARIETY MEANS (*****=NS)	792.69	.00	.53	.00	.00	.00	.00	4.03	.00

CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)

YIELD	KG/HA	1.00								
DAYS TO FLOWER		-.40++								
DAYS TO MATURITY		1.00								
NODULE ABUND 1		-.18								
NODULE ABUND 2		.00								
NODULE ACT. 1		.00								
NODULE ACT. 2		.00								
PLANT HEIGHT		-.07								
LODGING		.00								
SHATTER		.00								
HARVEST		.00								
PLANTS PER		.00								
FOODS PER		.00								
PLANT		.00								
HEIGHT		.00								
FOOD		.00								
100 SEED		.00								
WEIGHT		.00								
QUALITY		.00								
OF SEED		.00								
PERCENT		.00								
GERM.		.00								

TABLE 115

EXPERIMENT 127

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
14	MITCHELL	.00	.00	.00	.00	.00	.00	.00
11	CALLAND	.00	.00	.00	.00	.00	.00	.00
3	BOSSIER	.00	.00	.00	.00	.00	.00	.00
16	COLUMBUS	.00	.00	.00	.00	.00	.00	.00
4	WILLIAMS	.00	.00	.00	.00	.00	.00	.00
5	RANSOM	.00	.00	.00	.00	.00	.00	.00
12	FRANKLIN	.00	.00	.00	.00	.00	.00	.00
13	CUTLER 71	.00	.00	.00	.00	.00	.00	.00
9	DAVIS	.00	.00	.00	.00	.00	.00	.00
10	GASDY 71	.00	.00	.00	.00	.00	.00	.00
7	JAMES	.00	.00	.00	.00	.00	.00	.00
15	HILL	.00	.00	.00	.00	.00	.00	.00
6	DARE	.00	.00	.00	.00	.00	.00	.00
1	IMPROVED PELICAN	.00	.00	.00	.00	.00	.00	.00
8	FORREST	.00	.00	.00	.00	.00	.00	.00
2	RILLITO	.00	.00	.00	.00	.00	.00	.00
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN								
COEFFICIENT OF VARIATION								
5% LSD VARIETY MEANS (*****=NS)								
CORRELATIONS								
YIELD KG/HA								
DAYS TO FLOWER								
DAYS TO MATURITY								
NODULE ABUND 1								
NODULE ABUND 2								
NODULE ACT. 1								
NODULE ACT. 2								
NODULE PLANT								
HEIGHT								
LODGING								
SHATTER								
PLANTS HARVEST								
PODS PER PLANT								
POD HEIGHT								
100 SEED WEIGHT								
QUALITY OF SEED								
PERCENT GERM.								

TABLE 116 EXPERIMENT 123 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
11	COLUMBUS	1.00	.00	86.00	.00	16.00	.00	.00
4	JAMES	1.00	.00	75.25	.00	14.00	.00	.00
5	FORREST	1.00	.00	58.25	.00	15.25	.00	.00
1	RILLITO	1.00	.00	68.75	.00	15.75	.00	.00
3	DARE	1.00	.00	59.50	.00	17.50	.00	.00
2	WILLIAMS	1.00	.00	59.50	.00	18.00	.00	.00
9	MITCHELL	1.00	.00	60.50	.00	16.00	.00	.00
10	HILL	1.00	.00	56.25	.00	14.25	.00	.00
6	CALLAND	1.00	.00	59.25	.00	19.00	.00	.00
8	CUTLER 71	1.00	.00	56.25	.00	19.50	.00	.00
7	FRANKLIN	1.00	.00	57.25	.00	16.50	.00	.00
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN		1.00	.00	63.34	.00	16.52	.00	.00
COEFFICIENT OF VARIATION		.00	.00	2.35	.00	.42	.00	.00
5% LSD VARIETY MEANS (*****=NS)		.00%	.00%	7.41%	.00%	5.13%	.00%	.00%
		.00	.00	6.77	.00	1.22	.00	.00
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)								
YIELD	KG/HA	.00	.00	.78++	.00	-.48++	.00	.00
DAYS TO	FLOWER	.00	.00	.15	.00	-.50++	.00	.00
DAYS TO	MATURITY	.00	.00	.00	.00	.00	.00	.00
NODULE	ABUND 1	.00	.00	.00	.00	.00	.00	.00
NODULE	ABUND 2	.00	.00	.00	.00	.00	.00	.00
NODULE	ACT. 1	.00	.00	.00	.00	.00	.00	.00
NODULE	ACT. 2	.00	.00	.00	.00	.00	.00	.00
PLANT	HEIGHT	.00	.00	.80++	.00	-.41++	.00	.00
LODGING	HEIGHT	.00	.00	-.25	.00	-.33+	.00	.00
SHATTER	SHATTER	1.00	.00	.00	.00	.00	.00	.00
HARVEST	HARVEST	.00	1.00	.00	.00	.00	.00	.00
PODS PER	PLANT	.00	.00	1.00	.00	-.32+	.00	.00
POD	HEIGHT	.00	.00	.00	1.00	.00	.00	.00
100 SEED	WEIGHT	.00	.00	-.32+	.00	1.00	.00	.00
QUALITY	OF SEED	.00	.00	.00	.00	.00	1.00	.00
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	1.00

TABLE 117 EXPERIMENT 116 YEAR 1978

REGION - MIDDLE EAST
 SITE - ABU-GHRAIB
 LATITUDE - 35 DEG. 3 MIN. N
 COOPERATOR - DR. M.M. ELSAHOOKIE
 DATE PLANTED - MAY 7, 1978
 SOIL TYPE - SAND 19%, SILT 41%, CLAY 26%, PH 7.9
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 1750 MM
 NUMBER OF IRRIGATIONS - 25 (1750 MM)
 SUBSTITUTE VARIETY - LEE

COUNTRY - IRAQ
 ELEVATION - 30 M
 LONGITUDE - 44 DEG. 20 MIN. E
 DATE HARVESTED - NOVEMBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
5	RANSOM	1871.62	82.50	176.75	.00	.00	.00	.00	67.75	2.00
14	LEE	1843.70	80.75	174.50	.00	.00	.00	.00	48.25	1.00
3	BOSSIER	1833.28	83.50	180.00	.00	.00	.00	.00	71.50	1.00
15	COLUMBUS	1758.27	36.00	137.25	.00	.00	.00	.00	79.75	1.50
10	CALLAND	1683.25	34.50	126.50	.00	.00	.00	.00	75.25	1.25
7	FORREST	1574.90	61.25	159.00	.00	.00	.00	.00	53.50	1.00
16	CRAWFORD	1397.36	42.50	138.00	.00	.00	.00	.00	64.25	1.25
8	DAVIS	1322.35	69.50	163.25	.00	.00	.00	.00	86.75	1.00
4	WILLIAMS	1290.26	35.00	126.00	.00	.00	.00	.00	57.75	1.00
12	CUTLER 71	998.12	36.50	131.00	.00	.00	.00	.00	60.50	1.50
11	FRANKLIN	982.28	35.25	126.00	.00	.00	.00	.00	51.75	1.50
13	MITCHELL	949.77	42.25	130.75	.00	.00	.00	.00	59.50	1.25
9	GASOY 17	933.10	85.75	191.75	.00	.00	.00	.00	84.00	3.00
2	RILLITO	919.77	82.25	175.25	.00	.00	.00	.00	101.50	3.25
6	COBB	864.34	81.50	185.25	.00	.00	.00	.00	83.75	1.50
1	IMPROVED PELICAN	295.48	106.75	183.50	.00	.00	.00	.00	127.25	4.00
GRAND MEAN		1282.37	62.23	156.55	.00	.00	.00	.00	73.31	1.69
STANDARD ERROR OF A VARIETY MEAN		168.72	.30	.67	.00	.00	.00	.00	2.76	.20
COEFFICIENT OF VARIATION		26.31%	.95%	.85%	.00%	.00%	.00%	.00%	7.54%	23.16%
5% LSD VARIETY MEANS (*****=NS)		480.58	.84	1.90	.00	.00	.00	.00	7.87	.56

CORRELATIONS									
					(+ - PROB=.05				
					+ - PROB=.01)				
YIELD	KG/HA	1.00							
DAYS TO FLOWER		-.18	1.00						
DAYS TO MATURITY		-.10	.96++	1.00					
NODULE ABUND 1		.00	.00	.00	1.00				
NODULE ABUND 2		.00	.00	.00	.00	1.00			
NODULE ACT. 1		.00	.00	.00	.00	.00	1.00		
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	1.00	
PLANT HEIGHT		-.42++	.58++	.49++	.00	.00	.00	.00	1.00
LODGING		-.52++	.47++	.47++	.00	.00	.00	.00	.73++
SHATTER		.09	-.16	-.15	.00	.00	.00	.00	-.05
PLANTS HARVEST		.19	-.77++	-.81++	.00	.00	.00	.00	-.39++
PODS PER PLANT		.37++	.51++	.58++	.00	.00	.00	.00	-.12
POD HEIGHT		.00	.00	.00	.00	.00	.00	.00	.00
100 SEED WEIGHT		.73++	-.14	-.00	.00	.00	.00	.00	.00
QUALITY OF SEED		-.11	-.70++	-.74++	.00	.00	.00	.00	-.51++
PERCENT GERM.		-.21	.45++	.50++	.00	.00	.00	.00	-.37++
									.39++
									.50++

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
5	RANSOM	1.00	65.75	12.13	.00	15.78	1.00	83.75	39.3	25.1
14	LEE	1.25	50.00	20.50	.00	16.78	1.00	40.50	39.8	20.3
3	ROSSIER	1.00	48.75	12.33	.00	15.55	1.00	32.75	42.6	21.1
15	COLUMBUS	1.25	97.25	8.05	.00	15.50	2.00	94.75	41.7	23.3
10	CALLAND	1.25	204.00	5.10	.00	13.53	5.00	19.25	41.7	23.3
7	FORREST	1.25	124.50	9.33	.00	13.15	3.00	84.25	41.9	22.9
16	CRAWFORD	1.25	99.25	7.08	.00	13.65	4.00	22.75	40.4	22.8
8	DAVIS	1.00	84.00	12.65	.00	14.48	2.00	21.25	42.3	21.3
4	WILLIAMS	1.25	171.00	7.30	.00	13.58	1.00	20.75	44.3	20.6
12	CUTLER 71	1.25	115.25	6.65	.00	13.03	4.50	32.50	42.2	22.4
11	FRANKLIN	1.00	165.00	6.70	.00	12.15	5.00	18.25	42.1	21.9
13	MITCHELL	1.25	107.25	6.90	.00	13.85	5.00	91.25	41.6	22.0
9	GASOY 17	1.00	43.75	11.65	.00	13.35	1.00	95.50	38.1	22.1
2	RILLITO	1.25	50.75	12.45	.00	10.28	2.00	96.25	42.4	21.0
6	COBB	1.25	37.75	10.28	.00	14.15	1.00	91.25	38.1	21.5
1	IMPROVED PELICAN	1.00	50.75	5.68	.00	9.23	1.00	81.50	37.9	23.7
	GRAND MEAN	1.16	94.69	9.67	.00	13.63	2.47	57.91		
	STANDARD ERROR OF A VARIETY MEAN	.18	11.28	.61	.00	.40	.30	.94		
	COEFFICIENT OF VARIATION	31.08%	23.84%	12.59%	.00%	5.93%	24.67%	3.24%		
	5% LSD VARIETY MEANS (*****=NS)	*****	32.14	1.73	.00	1.15	.87	2.67		
C O R R E L A T I O N S										
	YIELD KG/HA	.09	.19	.37++	.00	.73++	.11	-.21		
	DAYS TO FLOWER	-.16	-.77++	.51++	.00	-.14	-.70++	.45++		
	DAYS TO MATURITY	-.15	-.81++	.58++	.00	.00	-.74++	.50++		
	NODULE ABUND 1	.00	.00	.00	.00	.00	.00	.00		
	NODULE ABUND 2	.00	.00	.00	.00	.00	.00	.00		
	NODULE ACT. 1	.00	.00	.00	.00	.00	.00	.00		
	NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00		
	PLANT LODGING	-.05	-.38++	-.12	.00	-.51++	-.37++	.39++		
	SHATTER	1.00	-.39++	-.08	.00	-.62++	-.28+	.50++		
	PLANTS HARVEST	.10	.10	.02	.00	.10	.06	.01		
	PODS PER PLANT	.02	-.54++	1.00	.00	-.04	.60++	-.50++		
	POD HEIGHT	.00	.00	.00	.00	.49++	-.55++	.09		
	100 SEED WEIGHT	.10	-.04	.49++	.00	.00	.00	.00		
	QUALITY OF SEED	.06	.60++	-.55++	.00	1.00	1.00	-.16		
	PERCENT GERM.	.01	-.50++	.09	.00	-.20	-.32++	1.00		

TABLE 118 EXPERIMENT 133 YEAR 1978

REGION - MIDDLE EAST
 SITE - RASHIDA
 LATITUDE - 36 DEG. 19 MIN. N
 COOPERATOR - S.D. SULAMAN
 DATE PLANTED - APRIL 16, 1978
 SOIL TYPE - SAND 50%, SILT 30%, CLAY 20%, PH 6.5
 FERTILIZER USED (KG/HA) - N 25.0, P 15.0
 NUMBER OF IRRIGATIONS - 16
 SUBSTITUTE VARIETY - LEE

COUNTRY - IRAQ
 ELEVATION - 223 M
 LONGITUDE - 43 DEG. 9 MIN. E
 DATE HARVESTED - SEPTEMBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
4	BOSSIER	2354.64	93.00	165.75	.00	.00	.00	.00	61.45	1.00
9	FORREST	2087.92	66.00	137.25	.00	.00	.00	.00	44.10	1.00
6	RANSOM	1858.70	88.00	159.75	.00	.00	.00	.00	54.55	1.00
7	LEE	1792.02	88.00	156.00	.00	.00	.00	.00	45.60	1.00
16	BRAGG	1771.19	90.00	159.50	.00	.00	.00	.00	73.00	1.00
12	CALLAND	1703.84	55.75	120.50	.00	.00	.00	.00	55.10	1.00
3	RILLITO	1644.50	94.50	157.75	.00	.00	.00	.00	67.95	1.00
11	GASOY 17	1529.47	90.00	164.75	.00	.00	.00	.00	83.05	1.00
10	DAVIS	1171.07	81.75	147.75	.00	.00	.00	.00	56.30	1.00
8	JANES	1125.22	60.50	133.50	.00	.00	.00	.00	57.90	1.00
5	RANSOM	998.12	56.75	114.25	.00	.00	.00	.00	46.38	1.00
13	FRANKLIN	950.19	54.50	122.25	.00	.00	.00	.00	44.20	1.00
1	IMPROVED PELICAN	862.67	119.25	170.50	.00	.00	.00	.00	82.28	2.00
14	CUTLER 71	783.49	55.50	117.00	.00	.00	.00	.00	40.20	1.00
2	KAHALA	633.88	65.75	137.25	.00	.00	.00	.00	48.10	1.00
15	MITCHELL	510.52	57.00	126.25	.00	.00	.00	.00	40.50	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.33++	.44++	.00	.00	.00	.00	.28+	-.21
DAYS TO FLOWER		.33++	1.00	.94++	.00	.00	.00	.00	.59++	.59++
DAYS TO MATURITY		.44++	.94++	1.00	.00	.00	.00	.00	.38++	.38++
NODULE ABUND 1		.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	1.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANT		.28+	.60++	.58++	.00	.00	.00	.00	1.00	.38++
LOGGING		-.21	.59++	.38++	.00	.00	.00	.00	.38++	1.00
SHATTER		-.40++	-.76++	-.77++	.00	.00	.00	.00	-.47++	-.29+
HARVEST		.67++	-.03	.02	.00	.00	.00	.00	.18	-.27+
PLANTS PER		.16	.26+	.30+	.00	.00	.00	.00	.27+	.24
POD		-.06	.20	.15	.00	.00	.00	.00	.11	.46++
100 SEED		.21	-.25+	-.15	.00	.00	.00	.00	-.33++	-.39++
QUALITY		-.40++	-.67++	-.67++	.00	.00	.00	.00	-.33++	-.25+
PERCENT		.37++	.59++	.59++	.00	.00	.00	.00	.26+	.20

TABLE 118

EXPERIMENT 133

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
4	BOSSIER	1.00	49.50	162.75	10.50	15.55	1.00	80.00
9	FORREST	2.00	50.75	99.50	14.75	11.68	1.50	73.25
6	RANSOM	1.00	66.00	41.25	14.50	14.98	1.00	87.00
7	LEE	1.75	52.25	70.00	15.50	15.25	1.00	90.25
16	BRAGG	1.00	72.00	39.75	12.25	12.60	1.00	85.75
12	CALLAND	2.25	110.25	54.75	12.75	14.33	2.75	72.50
3	RILLITO	1.00	44.00	49.75	6.50	10.73	1.00	88.00
11	GASOY 17	2.00	52.75	141.75	10.75	13.25	1.00	88.25
10	DAVIS	2.00	49.00	17.25	11.25	13.00	1.00	61.00
8	JAMES	2.75	39.75	69.50	16.50	13.28	1.50	35.00
5	RANSOM	2.75	50.75	71.00	8.75	13.55	2.00	63.50
13	FRANKLIN	2.75	39.00	54.25	8.25	13.00	2.25	47.75
1	IMPROVED PELICAN	1.00	21.75	123.25	19.25	10.18	.75	86.75
14	CUTLER 71	3.50	30.25	50.50	14.75	14.38	2.75	62.00
2	KAHALA	2.50	14.25	100.00	13.25	12.60	3.50	77.75
15	MITCHELL	2.00	17.25	71.25	11.00	14.65	1.50	60.75
	GRAND MEAN	1.95	47.47	76.03	12.53	13.31	1.59	72.47
	STANDARD ERROR OF A VARIETY MEAN	.21	5.77	18.97	1.09	.78	.21	5.75
	COEFFICIENT OF VARIATION	21.18%	24.33%	49.63%	17.36%	11.77%	26.35%	15.86%
	5% LSD VARIETY MEANS (*****=NS)	.59	16.45	53.75	3.10	2.23	.60	16.37

C O R R E L A T I O N S		(+ - PROB=.05	++ - PROB=.01)
YIELD	KG/HA	.67++	.16
DAYS TO FLOWER		-.03	.26+
DAYS TO MATURITY		-.77++	.02
NODULE ABUND 1		.00	.00
NODULE ABUND 2		.00	.00
NODULE ACT. 1		.00	.00
NODULE ACT. 2		.00	.00
PLANT	HEIGHT	-.47++	.18
LODGING		-.27+	.24
SHATTER		1.00	-.12
HARVEST		-.12	1.00
PLANT		-.16	-.18
PODS PER		-.07	1.00
100 SEED		.19	.06
QUALITY		.59++	.05
PERCENT		-.49++	.18

TABLE 119

EXPERIMENT 124

YEAR 1978

REGION - MIDDLE EAST
 SITE - UNAYZAH, GASSIM
 LATITUDE - 26 DEG. 4 MIN. N
 COOPERATOR - C.A.T.M.
 DATE PLANTED - AUGUST 24, 1978
 SOIL TYPE - SAND 92.9%, SILT 5.35%, CLAY 1.75%
 FERTILIZER USED (KG/HA) N 50, P 60
 AMOUNT OF MOISTURE - 390.0 MM
 NUMBER OF IRRIGATIONS 13 (390.0 MM)

COUNTRY - SAUDI ARABIA

ELEVATION - 724 M

LONGITUDE - 43 DEG. 59 MIN. E

DATE HARVESTED - NOVEMBER, 1978

CLAY 1.75%

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
8	FORREST	1137.73	41.50	99.00	3.00	.00	66.50	.00	45.00	.00
11	ACC 2120	1096.05	37.50	96.50	2.50	.00	62.50	.00	40.00	.00
7	JAMES	1083.55	41.00	104.50	3.00	.00	55.00	.00	38.00	.00
1	CALLAND	996.03	36.00	102.00	1.00	.00	100.00	.00	35.00	.00
2	FRANKLIN	912.68	33.00	88.00	2.50	.00	5.50	.00	37.00	.00
9	DAVIS	854.34	54.50	104.50	1.00	.00	85.00	.00	41.50	.00
16	COBB	850.17	37.50	94.00	1.00	.00	51.00	.00	41.00	.00
13	ROSSIER	821.00	41.00	97.50	3.00	.00	50.00	.00	36.50	.00
12	RILLITO	770.99	37.50	88.00	1.50	.00	80.00	.00	29.00	.00
5	BAGG	766.82	47.50	102.00	2.50	.00	25.00	.00	34.50	.00
10	IMPROVED PELICAN	716.81	45.00	95.50	3.00	.00	42.50	.00	30.00	.00
4	MITCHELL	675.13	33.00	91.00	2.50	.00	.00	.00	30.00	.00
3	CUTLER 71	612.62	33.00	92.00	1.00	.00	80.00	.00	34.00	.00
15	RANSOM	575.11	37.50	94.00	2.50	.00	68.50	.00	29.00	.00
14	WILLIAMS	537.61	38.00	93.00	1.00	.00	42.50	.00	30.00	.00
6	GASOY 17	450.09	41.50	97.50	3.00	.00	35.00	.00	30.00	.00
GRAND MEAN		803.55	39.69	96.19	2.13	.00	53.06	.00	35.81	.00
STANDARD ERROR OF A VARIETY MEAN		169.72	4.96	6.06	1.20	.00	23.92	.00	4.36	.00
COEFFICIENT OF VARIATION		29.87%	17.67%	8.91%	79.68%	.00%	63.76%	.00%	17.23%	.00%
5% LSD VARIETY MEANS (*****=NS)		*****	*****	*****	*****	.00	*****	.00	*****	.00

(+ - PROB=.05 ++ - PROB=.01)

CORRELATIONS

YIELD DAYS TO FLOWER	KG/HA	YIELD DAYS TO FLOWER	KG/HA	YIELD DAYS TO FLOWER	KG/HA	YIELD DAYS TO FLOWER	KG/HA	YIELD DAYS TO FLOWER	KG/HA	YIELD DAYS TO FLOWER	KG/HA
1.00	.01	1.00	.01	1.00	.01	1.00	.01	1.00	.01	1.00	.01
.01	.68++	.01	.68++	.01	.68++	.01	.68++	.01	.68++	.01	.68++
.19	.22	.19	.22	.19	.22	.19	.22	.19	.22	.19	.22
-.14	.00	-.14	.00	-.14	.00	-.14	.00	-.14	.00	-.14	.00
.00	.18	.00	.18	.00	.18	.00	.18	.00	.18	.00	.18
.38+	.00	.38+	.00	.38+	.00	.38+	.00	.38+	.00	.38+	.00
.00	.20	.00	.20	.00	.20	.00	.20	.00	.20	.00	.20
.70++	.00	.70++	.00	.70++	.00	.70++	.00	.70++	.00	.70++	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.49++	.07	.49++	.07	.49++	.07	.49++	.07	.49++	.07	.49++	.07
.15	-.14	.15	-.14	.15	-.14	.15	-.14	.15	-.14	.15	-.14
.25	.32	.25	.32	.25	.32	.25	.32	.25	.32	.25	.32
.16	-.39+	.16	-.39+	.16	-.39+	.16	-.39+	.16	-.39+	.16	-.39+
QUALITY OF SEED	.30	QUALITY OF SEED	.30	QUALITY OF SEED	.30	QUALITY OF SEED	.30	QUALITY OF SEED	.30	QUALITY OF SEED	.30
PERCENT	.00	PERCENT	.00	PERCENT	.00	PERCENT	.00	PERCENT	.00	PERCENT	.00
GERM.	.00	GERM.	.00	GERM.	.00	GERM.	.00	GERM.	.00	GERM.	.00

TABLE 119

EXPERIMENT 124

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
8	FORREST	.00	292.00	9.20	6.75	14.40	2.00	.00
11	ACC 2120	.00	251.50	7.50	4.50	15.00	1.50	.00
7	JAMES	.00	294.50	6.10	7.50	16.25	1.00	.00
1	CALLAND	.00	288.00	5.10	5.75	18.55	1.00	.00
2	FRANKLIN	.00	252.50	13.50	4.50	16.40	1.00	.00
9	DAVIS	.00	287.00	5.50	7.50	14.15	2.00	.00
16	COBB	.00	287.50	12.40	7.00	12.75	2.50	.00
13	BOSSIER	.00	211.00	11.40	5.50	13.45	2.50	.00
12	RILLITO	.00	240.50	13.20	5.25	13.00	2.50	.00
5	BRAGG	.00	274.00	6.30	7.50	14.50	2.00	.00
10	IMPROVED PELICAN	.00	260.00	10.60	9.00	11.40	3.00	.00
4	MITCHELL	.00	253.50	5.90	6.00	18.10	1.00	.00
3	CUTLER 71	.00	226.00	5.00	5.25	15.00	2.00	.00
15	RANSOM	.00	221.00	6.00	4.50	15.60	1.50	.00
14	WILLIAMS	.00	285.00	11.70	4.75	17.00	1.00	.00
6	GASOY 17	.00	243.50	7.90	5.50	14.25	2.00	.00
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN		.00	260.47	8.58	6.05	14.99	1.78	.00
COEFFICIENT OF VARIATION		.00	30.96	3.46	1.22	.72	.29	.00
5% LSD VARIETY MEANS (*****=NS)		.00	16.81% *****	57.07% *****	28.54% *****	6.81% *****	22.78% *****	.00
C O R R E L A T I O N S								
			(+ - PROB=.05			++ - PROB=.01)		
YIELD	KG/HA	.00	.49++	.15	.25	.16	.18	.00
DAYS TO FLOWER		.00	.07	-.14	.32	-.39+	.30	.00
DAYS TO MATURITY		.00	.20	-.31	.32	-.04	-.03	.00
NODULE AROUND 1		.00	-.57++	-.13	-.09	-.05	-.03	.00
NODULE AROUND 2		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.30	-.05	.28	-.10	.15	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00
PLANT		.00	.48++	.26	.46++	-.19	.23	.00
HEIGHT		.00	.00	.00	.00	.00	.00	.00
LODGING		.00	.00	.00	.00	.00	.00	.00
SHATTER		1.00	.00	.00	.00	.00	.00	.00
PLANTS		.00	.00	.00	.00	.00	.00	.00
PODS PER PLANT		.00	1.00	.16	.50++	.11	-.10	.00
POD		.00	.16	1.00	.05	-.27	.13	.00
HEIGHT		.00	.50++	.05	1.00	-.36+	.39+	.00
100 SEED WEIGHT		.00	.11	-.27	-.36+	1.00	-.89++	.00
QUALITY OF SEED		.00	-.10	.13	.39+	-.89++	1.00	.00
PERCENT GERM.		.00	.00	.00	.00	.00	.00	1.00

TABLE 120 EXPERIMENT 159 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
10	CALLAND	.00	221.00	21.75	5.43	19.25	1.00	97.25	41.7	21.7
8	DAVIS	.00	109.00	32.75	7.50	16.00	2.50	82.00	41.6	17.7
13	MITCHELL	.00	138.25	23.75	5.70	18.75	2.00	94.50	38.9	24.8
7	FORREST	.00	188.00	38.25	5.90	18.25	2.00	91.50	41.6	17.7
12	CUTLER 71	.00	168.75	31.50	5.88	18.00	2.25	92.75	43.1	22.3
11	FRANKLIN	.00	183.75	22.25	5.13	17.75	2.25	90.25	42.3	22.0
15	CRAWFORD	.00	147.75	30.50	5.38	18.00	2.00	93.00	41.6	21.9
4	RANSOM	.00	123.50	26.75	5.30	17.25	2.25	88.50	40.8	22.5
3	WILLIAMS	.00	230.00	25.75	5.38	17.50	2.25	91.00		
6	JAMES	.00	144.00	28.00	6.95	17.50	2.00	88.75	40.1	23.9
1	RILLITO	.00	119.00	29.50	7.60	15.50	3.25	85.25	40.5	21.3
9	GASOY 17	.00	136.25	30.75	5.88	11.75	4.25	64.25	42.2	19.5
14	BRAGG	.00	160.75	20.50	6.63	10.00	5.00	44.00	41.7	13.6
5	COBB	.00	103.75	28.75	7.25	14.25	3.50	69.50	41.0	18.5
2	BOUSSIER	.00	100.50	35.50	5.33	11.75	4.75	59.50	41.6	19.0
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	.00	.37++	.19	.01	.79++	-.72++	.65++		
DAYS TO	FLOWER	.00	-.43++	.21	.56++	-.45++	.41++	-.38++		
DAYS TO	MATURITY	.00	-.53++	.23	.35++	-.78++	.70++	-.67++		
NODULE	ABUND 1	.00	-.22	.27+	.13	-.14	.06	-.13		
NODULE	ABUND 2	.00	-.27+	.21	.11	-.03	.04	-.09		
NODULE	ACT. 1	.00	.32+	-.02	-.05	.16	-.11	.19		
NODULE	ACT. 2	.00	.31+	-.05	.04	.12	-.02	.09		
PLANT	HEIGHT	.00	-.38++	.08	.30+	-.41++	.30+	-.34++		
LODGING		.00	.00	.00	.00	.00	.00	.00		
SHATTER		1.00	.00	.00	.00	.00	.00	.00		
PLANTS	HARVEST	.00	1.00	-.20	-.23	.33++	-.36++	.34++		
PODS PER	PLANT	.00	-.20	1.00	.31+	.05	-.01	-.01		
POD	HEIGHT	.00	-.23	.31+	1.00	-.13	.12	-.16		
100 SEED	WEIGHT	.00	.33++	.05	-.13	1.00	-.90++	.90++		
QUALITY	OF SEED	.00	-.36++	-.01	.12	-.90++	1.00	-.85++		
PERCENT	GERM.	.00	.34++	-.01	-.16	.90++	-.85++	1.00		

TABLE 121

EXPERIMENT 218

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
2	CALLAND	1.00	208.25	30.43	12.98	16.70	3.75	100.00	39.4	23.4
14	CORSOY	1.00	204.25	44.60	7.80	13.50	3.00	100.00	38.3	23.5
5	MITCHELL	1.00	158.25	41.93	10.90	13.90	3.00	100.00	37.6	23.8
9	HARCOR	1.00	193.00	40.70	6.30	13.50	3.00	100.00	36.2	26.1
10	HODGSON	1.00	187.50	31.43	7.50	12.90	3.00	100.00	34.8	27.2
3	FRANKLIN	1.00	153.75	31.48	11.23	14.00	3.00	100.00	37.0	25.0
12	COLUMBUS	1.00	182.50	34.05	13.10	14.90	3.00	100.00	42.2	23.5
8	STEELE	1.00	194.50	30.20	7.30	14.83	4.00	100.00	38.6	24.5
15	EVANS	1.00	153.50	22.80	11.10	13.40	3.25	100.00	41.1	23.1
16	CRAWFORD	1.00	186.25	34.93	5.83	12.40	3.75	100.00	38.4	25.2
4	CUTLER 71	1.00	168.75	26.90	12.75	16.80	3.00	100.00	40.0	23.4
1	WILLIAMS	1.00	205.75	26.60	11.25	12.50	3.75	100.00	41.0	23.8
11	ELF	1.00	179.00	28.25	7.45	12.70	3.50	100.00	38.5	23.7
17	AMSOY 71	1.00	171.75	65.98	9.55	13.90	3.75	100.00	38.2	25.6
6	ALTONA	1.00	201.25	22.80	10.35	13.10	4.00	100.00	43.4	18.2
13	UNION	1.00	173.00	27.50	9.48	13.10	4.75	100.00	40.9	22.5
7	SWIFT	1.00	192.00	32.35	6.45	9.40	3.25	100.00	37.6	24.4
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE AROUND 1										
NODULE AROUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
NODULE PLANT										
LODGING										
SHATTER										
PLANTS										
PODS PER PLANT										
POD										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT										
GERM.										

TABLE 122

EXPERIMENT 214

YEAR 1978

REGION - NORTH AMERICA
 SITE - URBANA, ILLINOIS
 LATITUDE - 40 DEG. 7 MIN. N
 COOPERATOR - INTSOY
 DATE PLANTED - MAY 27, 1978
 SOIL TYPE - FLANIGAN B O, SILT LOAM, PH 7.3
 AMOUNT OF MOISTURE - 428 MM

COUNTRY - UNITED STATES
 ELEVATION - 226 M
 LONGITUDE - 88 DEG. 13 MIN. W

DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
14	CORSOY	3618.64	26.75	105.00	.00	.00	.00	.00	101.25	4.25
10	HODGSON	3361.09	26.25	82.00	.00	.00	.00	.00	84.50	3.75
1	WILLIAMS	3344.42	34.00	119.00	.00	.00	.00	.00	103.25	2.75
9	HARCOR	3264.40	28.25	103.75	.00	.00	.00	.00	100.00	4.25
4	CUTLER 71	3223.98	34.75	118.50	.00	.00	.00	.00	123.00	2.25
13	UNION	3179.39	34.75	121.00	.00	.00	.00	.00	120.00	2.75
11	ELF	3115.62	33.25	116.00	.00	.00	.00	.00	52.50	1.00
8	STEELE	2820.56	21.50	82.00	.00	.00	.00	.00	88.75	3.75
5	MITCHELL	2773.05	37.25	122.00	.00	.00	.00	.00	112.50	4.00
15	EVANS	2740.55	42.50	129.75	.00	.00	.00	.00	116.25	4.00
7	SWIFT	2684.29	24.00	92.00	.00	.00	.00	.00	86.25	5.00
2	CALLAND	2536.76	30.25	117.75	.00	.00	.00	.00	107.50	3.50
3	FRANKLIN	2446.74	36.25	125.25	.00	.00	.00	.00	110.00	3.25
12	COLUMBUS	2432.57	38.50	135.00	.00	.00	.00	.00	109.25	4.00
16	CRAWFORD	2363.81	21.00	87.00	.00	.00	.00	.00	76.25	3.50
6	ALTONA	1566.98	21.50	79.00	.00	.00	.00	.00	72.50	4.75
GRAND MEAN		2842.05	30.67	108.44	.00	.00	.00	.00	97.73	3.55
STANDARD ERROR OF A VARIETY MEAN		222.29	1.09	1.48	.00	.00	.00	.00	4.07	.31
COEFFICIENT OF VARIATION		15.64%	7.12%	2.73%	.00%	.00%	.00%	.00%	8.32%	17.31%
5% LSD VARIETY MEANS (*****=NS)		633.17	3.11	4.22	.00	.00	.00	.00	11.58	.87
C O R R E L A T I O N S										
			(+ - PROB=.05		++ - PROB=.01)					
YIELD	KG/HA	1.00								
DAYS TO FLOWER		.12		.11	.00	.00	.00	.00	.21	-.34++
DAYS TO MATURITY		1.00	.89++	.89++	.00	.00	.00	.00	.55++	-.29+
NODULE ABUND 1		.00	1.00	1.00	.00	.00	.00	.00	.59++	-.31+
NODULE ABUND 2		.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	1.00	.00	.00	.00
PLANT HEIGHT		.21	.55++	.59++	.00	.00	.00	.00	.00	.00
LOGGING		-.34++	-.29+	-.31+	.00	.00	.00	.00	1.00	.08
SHATTER		-.45++	-.60++	-.71++	.00	.00	.00	.00	.08	1.00
HARVEST		.33++	.01	.03	.00	.00	.00	.00	-.45++	.42++
PLANT		.21	.22	.16	.00	.00	.00	.00	.07	-.15
PODS PER PLANT		.17	.62++	.65++	.00	.00	.00	.00	.12	-.00
100 SEED WEIGHT		.32++	-.00	-.06	.00	.00	.00	.00	.66++	-.22
QUALITY OF SEED		.00	.00	.00	.00	.00	.00	.00	.18	-.34++
PERCENT GERM.		.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 122 EXPERIMENT 214 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
14	CORSOY	1.25	128.50	50.65	10.63	16.95	.00	.00
10	HODGSON	2.00	110.25	47.50	7.73	18.53	.00	.00
1	WILLIAMS	1.00	152.25	28.05	12.85	20.58	.00	.00
9	HARCOR	1.25	142.00	34.80	5.85	16.48	.00	.00
4	CUTLER 71	1.00	117.25	43.50	17.98	20.60	.00	.00
13	UNION	1.00	139.75	38.20	12.93	20.93	.00	.00
11	ELF	1.00	110.25	43.15	6.55	17.50	.00	.00
8	STEELE	1.50	98.00	36.15	6.03	18.50	.00	.00
5	MITCHELL	1.00	100.50	42.50	12.75	16.28	.00	.00
15	EVANS	1.00	98.25	51.85	14.53	17.43	.00	.00
7	SWIFT	2.25	119.00	36.20	7.50	17.20	.00	.00
2	CALLAND	1.00	125.25	32.55	13.60	18.00	.00	.00
3	FRANKLIN	1.00	112.00	44.35	11.70	16.60	.00	.00
12	COLUMBUS	1.00	90.00	45.50	13.53	15.00	.00	.00
16	CRAWFORD	1.75	107.50	36.80	6.18	16.78	.00	.00
6	ALTONA	4.00	109.50	31.50	5.25	18.08	.00	.00
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN		1.44	116.27	40.20	10.35	17.84	.00	.00
COEFFICIENT OF VARIATION		.14	11.44	5.88	1.38	.44	.00	.00
5% LSD VARIETY MEANS (*****=NS)		19.74%	19.67%	29.24%	26.64%	4.95%	.00%	.00%
		.40	32.57	*****	3.92	1.26	.00	.00
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)								
YIELD	KG/HA	-.45++	.33++	.21	.17	.32++	.00	.00
DAYS TO FLOWER		-.60++	.01	.22	.62++	-.00	.00	.00
DAYS TO MATURITY		-.71++	.03	.16	.65++	-.06	.00	.00
NODULE ABUND 1		.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00
PLANT		.00	.00	.00	.00	.00	.00	.00
LOGGING		-.45++	.07	.12	.66++	.18	.00	.00
SHATTER		.42++	-.15	-.00	-.22	-.34++	.00	.00
HARVEST		1.00	-.06	-.14	-.45++	-.07	.00	.00
PLANTS PER PLANT		-.06	1.00	-.47++	.10	.24	.00	.00
PODS PER PLANT		-.14	-.47++	1.00	-.03	-.17	.00	.00
HEIGHT		-.45++	.10	-.03	1.00	.19	.00	.00
100 SEED WEIGHT		-.07	.24	-.17	.19	1.00	.00	.00
QUALITY OF SEED		.00	.00	.00	.00	.00	1.00	.00
PERCENT GERM.		.00	.00	.00	.00	.00	.00	1.00

TABLE 123 EXPERIMENT 99 YEAR 1978

REGION - OCEANIA COUNTRY - FIJI
 SITE - NAISELESELE ELEVATION - 50 M
 LATITUDE - 16 DEG. 40 MIN. S LONGITUDE - 178 DEG. 45 MIN. E
 COOPERATORS - M. PRASAD, R. VINER
 DATE PLANTED - FEBRUARY 15, 1978 DATE HARVESTED - JUNE, 1978
 SOIL TYPE - SANDY LOAM, TALASIGA SOIL, SAND 70%, SILT 22%, CLAY 8%, PH 4.5
 FERTILIZER USED (KG/HA) - N 25.0, P 24.0, K 20.8

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LONGING
2	ORBA	1935.36	41.00	98.00	2.50	2.50	98.75	100.00	91.75	5.00
6	IMPROVED PELICAN	1799.82	41.00	107.00	3.50	3.00	100.00	100.00	87.60	1.50
7	RILLITO	1733.16	28.00	107.00	2.00	1.50	100.00	100.00	64.95	1.75
1	HARDEE LS	1610.95	49.00	112.25	3.25	2.50	100.00	100.00	60.08	1.00
5	JUPITER	1495.96	41.00	110.50	3.50	3.25	96.25	100.00	56.20	1.00
3	IAC-2	1437.08	41.00	109.25	3.00	2.00	100.00	100.00	79.00	1.25
4	CARIBE	1437.08	28.00	114.00	3.00	3.50	100.00	100.00	109.08	3.25
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
*****=NS										
CORRELATIONS										
(+ - PROB=.05 +- - PROB=.01)										
YIELD	KG/HA	1.00								
DAYS TO FLOWER		.05								
DAYS TO MATURITY		-0.24								
NODULE ABUND 1		.05								
NODULE ABUND 2		.01								
NODULE ACT. 1		.15								
NODULE ACT. 2		.01								
PLANT HEIGHT		-0.04								
LOGGING		.12								
SHATTER		-0.17								
HARVEST		.03								
PLANT		.30								
PODS PER		-0.34								
100 SEED		-0.03								
QUALITY		-0.44								
PERCENT		-0.09								
PLANTS		.12								
PODS PER		-0.26								
100 SEED		-0.17								
QUALITY		-0.39								
PERCENT		.06								
PLANT		.02								
LOGGING		.00								
SHATTER		.00								
HARVEST		.00								
PLANT		.00								
PODS PER		.00								
100 SEED		.00								
QUALITY		.00								
PERCENT		.00								

TABLE 123 EXPERIMENT 99 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
2	ORBA	1.00	81.25	12.33	2.10	13.25	2.75	42.50	44.4	20.0
6	IMPROVED PELICAN	1.25	76.50	7.95	6.15	15.25	1.75	57.75	45.4	19.4
7	RILLITO	1.25	55.50	7.70	1.58	17.75	3.75	21.50	47.0	22.6
1	HARDEE LS	1.25	11.25	23.27	6.00	18.38	3.00	59.25	45.2	20.2
5	JUPITER	1.00	64.75	7.31	2.08	19.50	4.00	33.00	46.5	18.7
3	IAC-2	1.00	34.25	16.31	5.70	17.00	2.75	45.00	45.1	20.2
4	CARIBE	2.00	91.25	7.32	9.93	13.50	4.75	62.75	48.7	15.2
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	-.17	.03	.30	-.34	-.03	-.44+	-.09		
DAYS TO FLOWER		-.45+	-.52++	.61++	-.10	.24	-.49++	.29		
DAYS TO MATURITY		.41+	-.25	.20	.42+	.45+	.37	.33		
NODULE ABUND 1		.03	-.16	.14	.27	-.02	-.29	.37		
NODULE ABUND 2		.25	.32	-.14	.34	-.30	.03	.44+		
NODULE ACT. 1		.19	-.13	.17	.33	-.29	-.14	.22		
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00		
PLANT		.46+	.63++	-.30	.56++	-.72++	.10	.52++		
LOGGING		.19	.60++	-.19	-.03	-.62++	.16	.08		
SHATTER		1.00	.30	-.22	.46+	-.17	.45+	.38+		
HARVEST		.30	1.00	-.68++	.02	-.53++	.25	.03		
PLANT		-.22	-.68++	1.00	-.01	.32	-.34	.25		
POD		.46+	.02	-.01	1.00	-.37	.04	.79++		
HEIGHT		-.17	-.53++	.32	-.37	1.00	.11	-.34		
WEIGHT		.45+	.25	-.34	.04	.11	1.00	-.12		
OF SEED		.38+	.03	.25	.79++	-.34	-.12	1.00		
PERCENT										
GERM.										

TABLE 124 EXPERIMENT 11 YEAR 1978

REGION - OCEANIA COUNTRY - TAHITI
 SITE - PAPARA ELEVATION - 2 M
 COOPERATORS - R. YAU, JEAN LOUIS REBOUL
 LATITUDE - 17 DEG, 30 MIN, S LONGITUDE - 149 DEG, 30 MIN, W
 SOIL TYPE - SAND 42%, SILT 30%, CLAY 14%, PH 7.4
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 DATE PLANTED - MAY 24, 1978 DATE HARVESTED - SEPTEMBER, 1978
 AMOUNT OF MOISTURE - 991 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT, 1	NODULE ACT, 2	PLANT HEIGHT	LODGING
9	JUPITER	2781.18	44.00	105.00	.00	.00	.00	.00	56.50	2.75
4	HARDEE LS	2546.93	50.00	105.00	.00	.00	.00	.00	48.75	1.75
7	TUNIA	2127.47	42.00	105.00	.00	.00	.00	.00	48.50	1.00
13	BOSSIER	1968.27	42.00	95.25	.00	.00	.00	.00	35.15	1.50
3	SJ-2	1940.55	42.00	97.00	.00	.00	.00	.00	49.05	2.25
11	KAHALA	1862.66	42.00	97.00	.00	.00	.00	.00	38.90	1.25
12	RILLITO	1809.03	33.00	95.25	.00	.00	.00	.00	40.25	1.00
1	CH-3	1808.78	42.00	105.00	.00	.00	.00	.00	54.75	1.75
10	IMPROVED PELICAN	1795.03	37.00	90.00	.00	.00	.00	.00	44.40	1.50
14	WILLIAMS	1783.61	35.25	90.00	.00	.00	.00	.00	40.80	1.75
6	IAC-2	1773.06	42.00	101.00	.00	.00	.00	.00	42.65	1.50
8	CARIBE	1675.71	39.75	90.00	.00	.00	.00	.00	42.15	1.25
5	ORBA	1599.61	34.75	90.00	.00	.00	.00	.00	42.05	1.75
2	UFV-3	1478.67	35.25	99.00	.00	.00	.00	.00	25.55	1.25
15	RANSON	1351.06	33.00	105.00	.00	.00	.00	.00	26.20	1.00
16	COBB	1090.05	33.00	105.00	.00	.00	.00	.00	22.50	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.55++	.19	.00	.00	.00	.00	.57++	.38++
DAYS TO FLOWER		.55++	1.00	.28+	.00	.00	.00	.00	.52++	.38++
DAYS TO MATURITY		.19	.28+	1.00	.00	.00	.00	.00	.03	.01
NODULE ABUND 1		.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE ACT, 1		.00	.00	.00	.00	.00	1.00	.00	.00	.00
NODULE ACT, 2		.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANT HEIGHT		.57++	.52++	.03	.00	.00	.00	.00	1.00	.58++
LODGING		.38++	.38++	.01	.00	.00	.00	.00	.58++	1.00
SHATTER		.00	.00	.00	.00	.00	.00	.00	.00	.00
HARVEST		.21	.17	.11	.00	.00	.00	.00	.00	.00
PLANTS PER		.46++	.46++	.44++	.00	.00	.00	.00	.23	.21
PODS PER		.00	.00	.00	.00	.00	.00	.00	.62++	.33++
100 SEED		.13	.10	.28+	.00	.00	.00	.00	.00	.00
QUALITY		.00	.00	.00	.00	.00	.00	.00	-.12	-.07
OF SEED		.00	.00	.00	.00	.00	.00	.00	.00	.00
PERCENT		.04	.02	-.43++	.00	.00	.00	.00	.29+	.22
GERM.										

TABLE 124

EXPERIMENT 11

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
9	JUPITER	1.00	163.50	28.60	.00	22.40	1.00	80.00	44.7	20.1
4	HARDEE LS	1.00	185.25	29.00	.00	20.33	1.00	70.75	46.2	19.3
7	TUNIA	1.00	132.00	24.00	.00	25.43	1.00	75.50	44.9	19.6
13	BOSSIER	1.00	156.50	17.75	.00	20.95	1.00	73.25	46.0	17.9
3	SJ-2	1.00	165.25	22.75	.00	16.85	1.00	85.00	45.7	15.4
11	KAHALA	1.00	178.50	14.75	.00	25.80	1.00	73.00	45.5	17.9
12	RILLITO	1.00	151.00	16.75	.00	20.33	1.00	83.25	46.2	18.5
1	CH-3	1.00	146.50	34.25	.00	19.93	1.00	92.75	43.8	19.8
10	IMPROVED PELICAN	1.00	191.25	15.75	.00	17.90	1.00	93.50	47.3	18.6
14	WILLIAMS	1.00	184.75	13.00	.00	24.08	1.00	87.00	43.3	19.2
6	IAC-2	1.00	163.75	18.75	.00	21.85	1.00	74.25	46.0	18.7
8	CARIBE	1.00	146.00	18.75	.00	18.73	1.00	93.00	50.6	12.8
5	ORBA	1.00	151.00	22.00	.00	16.35	1.00	97.00	45.0	12.8
2	UFV-3	1.00	126.00	17.75	.00	20.03	1.00	72.00	48.1	16.7
15	RANSOM	1.00	148.00	19.50	.00	21.98	1.00	75.00	44.1	19.9
16	COBB	1.00	167.75	13.25	.00	21.98	1.00	60.50	43.2	18.2
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	.00	.21	.46++	.00	.13	.00	.04		
DAYS TO	FLOWER	.00	.17	.46++	.00	.10	.00	.02		
DAYS TO	MATURITY	.00	-.11	.44++	.00	.28+	.00	-.43++		
NODULE	ABUND 1	.00	.00	.00	.00	.00	.00	.00		
NODULE	ABUND 2	.00	.00	.00	.00	.00	.00	.00		
NODULE	ACT. 1	.00	.00	.00	.00	.00	.00	.00		
NODULE	ACT. 2	.00	.00	.00	.00	.00	.00	.00		
PLANT	HEIGHT	.00	.23	.62++	.00	-.12	.00	.29+		
LODGING	SHATTER	.00	.21	.33++	.00	-.07	.00	.22		
PLANTS	HARVEST	1.00	.00	.00	.00	.00	.00	.00		
PODS PER	PLANT	.00	1.00	-.17	.00	.00	.00	.01		
FOD	HEIGHT	.00	-.17	1.00	1.00	-.18	.00	.10		
100 SEED	WEIGHT	.00	.00	.00	.00	.00	.00	.00		
QUALITY	OF SEED	.00	.00	-.18	.00	1.00	.00	-.27+		
PERCENT	GERM.	.00	.01	.10	.00	.00	1.00	.00		
		.00	.01	.10	.00	-.27+	.00	1.00		

TABLE 125

EXPERIMENT 220

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
1	WILLIAMS	1.00	276.25	22.50	12.00	19.10	4.25	90.00	43.0	21.4
15	EVANS	1.00	296.25	35.50	15.00	19.70	3.50	94.00	43.6	20.0
16	CRAWFORD	1.00	299.25	23.75	6.25	12.15	3.50	88.00	40.7	23.1
2	CALLAND	1.25	306.25	23.25	13.75	18.40	4.00	90.00	43.2	18.4
9	HARCOR	1.00	285.00	27.00	5.75	14.03	4.25	90.00	41.5	21.8
12	COLUMBUS	1.00	302.50	29.50	16.25	19.10	3.50	98.00	44.2	19.6
7	SWIFT	1.75	342.50	23.00	7.50	13.00	4.50	95.75	40.8	22.7
8	STEELE	1.25	259.50	22.50	10.00	18.00	3.50	96.00	41.6	21.7
6	ALTONA	2.25	237.50	25.00	8.75	14.40	4.50	72.00	44.1	17.9
11	ELF	1.75	250.00	24.50	6.75	15.03	4.25	88.00	43.0	21.0
4	HALESOY 71	1.00	320.00	32.25	10.00	17.03	3.25	98.00	43.5	20.1
10	HODGSON	1.25	267.50	25.75	8.75	15.10	3.75	84.00	40.9	22.5
13	UNION	1.50	273.75	25.75	11.75	18.00	4.00	88.00	43.2	19.7
5	MITCHELL	2.75	253.75	31.50	7.50	17.00	4.75	94.00	44.1	19.2
3	FRANKLIN	1.75	266.25	26.25	14.25	17.08	4.50	80.00	43.9	18.8
14	SRF 450	1.75	326.25	40.25	10.75	18.30	4.50	86.00	43.1	20.2
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
.96 *****										

STANDARD ERROR OF A VARIETY MEAN
COEFFICIENT OF VARIATION
5% LSD VARIETY MEANS (*****=NS)

C O R R E L A T I O N S

++ - PROB=.01)

(+ - PROB=.05

YIELD	KG/HA	YIELD	KG/HA
DAYS TO FLOWER	-.46++	.01	.20
DAYS TO MATURITY	-.06	.13	.19
NODULE ABUND 1	.16	.08	.20
NODULE ABUND 2	.00	.00	.00
NODULE ACT. 1	.00	.00	.00
NODULE ACT. 2	.00	.00	.00
PLANT	.00	.00	.00
LODGING	-.16	.24	.45++
SHATTER	.25+	.20	.10
HARVEST	1.00	-.07	-.33++
PLANT	-.07	1.00	.12
PODS PER	.14	.12	.26+
POD	-.33++	.12	1.00
100 SEED	-.11	.00	.60++
QUALITY	.51++	-.08	-.27+
PERCENT	-.25+	.27+	.07
GERM.		.10	.29+

TABLE 126

EXPERIMENT 162

YEAR 1978

REGION - SOUTH AMERICA
 SITE - CERRO AZUL
 LATITUDE - 27 DEG. 39 MIN. S
 COOPERATOR - WILHELM REUPKE
 DATE PLANTED - NOVEMBER 23, 1978
 SOIL TYPE - SAND 10.0%, SILT 20.0%, CLAY 70.0%, PH 5.4

COUNTRY - ARGENTINA
 ELEVATION - 283 M
 LONGITUDE - 55 DEG. 26 MIN. W
 DATE HARVESTED - MARCH, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEULE ABUND 1	NODEULE ABUND 2	NODEULE ACT. 1	NODEULE ACT. 2	PLANT HEIGHT	LODGING
5	RANSOM	2967.83	45.50	136.75	4.50	4.00	.00	.00	65.75	1.00
6	COBB	2886.80	57.50	148.00	4.25	4.00	.00	.00	91.50	1.50
15	BAGG	2685.40	45.75	137.25	4.00	4.00	.00	.00	82.75	2.00
2	RILLITO	2683.08	48.25	132.00	4.25	4.00	.00	.00	87.25	2.00
10	GASOY 17	2358.98	50.25	143.00	4.50	4.50	.00	.00	78.00	1.25
3	BOSSIER	2213.14	61.25	141.50	4.50	4.00	.00	.00	76.50	1.75
9	DAVIS	2002.47	57.75	139.25	4.00	4.00	.00	.00	77.50	1.50
16	CRAWFORD	1983.95	31.00	124.50	4.75	4.25	.00	.00	66.50	1.25
8	FORREST	1926.08	43.00	130.00	4.25	4.00	.00	.00	62.75	1.00
1	IMPROVED PELICAN	1794.12	81.00	146.00	5.00	4.75	.00	.00	113.75	2.25
14	MITCHELL	1406.59	31.00	125.75	4.50	4.25	.00	.00	76.25	1.00
13	CUTLER 71	1370.48	30.75	117.00	4.75	4.25	.00	.00	62.25	1.00
7	JAMES	1297.33	33.00	120.25	4.00	4.00	.00	.00	61.50	1.00
11	CALLAND	1176.02	24.75	124.50	4.50	4.00	.00	.00	56.50	1.00
4	WILLIAMS	1132.03	25.50	118.25	4.25	4.25	.00	.00	58.75	1.00
12	FRANKLIN	1081.10	25.00	120.50	4.25	4.25	.00	.00	74.75	1.25
GRAND MEAN		1935.34	43.20	131.53	4.39	4.16	.00	.00	74.52	1.36
STANDARD ERROR OF A VARIETY MEAN		246.99	.40	1.17	.24	.16	.00	.00	3.16	.20
COEFFICIENT OF VARIATION		25.52%	1.86%	1.77%	10.78%	7.56%	.00%	.00%	8.48%	29.69%
5% LSD VARIETY MEANS (*****=NS)		703.54	1.14	3.32	*****	.45	.00	.00	8.99	.57

CORRELATIONS
 (+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODEULE ABUND 1	NODEULE ABUND 2	NODEULE ACT. 1	NODEULE ACT. 2	PLANT HEIGHT	LODGING
1.00	.47++	1.00	-.14	-.18	.00	.00	.46++	.46++
.47++	1.00	.87++	.11	.15	.00	.00	.77++	.59++
.59++	.87++	1.00	.05	.07	.00	.00	.67++	.47++
-.14	.11	.05	1.00	.54++	.00	.00	.10	.06
-.18	.15	.07	.54++	1.00	.00	.00	.26+	.03
.00	.00	.00	.00	.00	1.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	1.00	.00	.00
.46++	.77++	.67++	.10	.26+	.00	.00	1.00	.72++
.46++	.59++	.47++	.06	.03	.00	.00	.72++	1.00
-.50++	-.57++	-.58++	.06	-.05	.00	.00	-.41++	-.32+
.17	-.02	.01	-.15	-.23	.00	.00	.07	.12
.00	.00	.00	.00	.00	.00	.00	.00	.00
.49++	.62++	.58++	.03	.00	.00	.00	.55++	.55++
.38++	-.40++	-.23	-.28+	-.39++	.00	.00	-.42++	-.19
-.66++	-.83++	-.77++	.00	.01	.00	.00	-.57++	-.49++
.61++	.79++	.77++	-.04	.01	.00	.00	.46++	.44++

TABLE 126

EXPERIMENT 162

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
5	RANSOM	1.00	163.00	.00	20.75	20.98	1.75	79.75	40.8	22.4
6	COBB	1.00	170.75	.00	18.25	17.55	2.25	90.00	41.1	19.7
15	BRAGG	1.00	181.00	.00	23.75	19.68	2.00	83.75	41.9	20.6
2	RILLITO	1.00	177.00	.00	21.00	18.55	2.50	73.25	43.5	19.7
10	GASOY 17	1.00	173.25	.00	16.50	17.98	2.25	96.50	42.0	17.8
3	ROSSIER	1.00	159.50	.00	19.75	16.45	2.25	96.00	43.4	19.0
9	DAVIS	1.00	155.25	.00	19.75	18.28	2.25	81.75	42.2	20.3
16	CRAWFORD	1.00	175.75	.00	14.25	19.65	3.75	64.25	41.8	20.7
8	FORREST	1.00	191.75	.00	18.00	17.23	2.75	92.25	41.7	20.4
1	IMPROVED PELICAN	1.00	163.00	.00	21.75	11.93	1.25	98.00	41.8	19.2
14	MITCHELL	1.75	179.25	.00	16.50	16.75	4.75	27.50	43.5	21.6
13	CUTLER 71	1.50	153.25	.00	15.25	18.73	4.00	39.25	42.5	21.6
7	JAMES	1.50	166.25	.00	16.75	19.63	4.00	57.00	41.9	20.6
11	CALLAND	2.00	176.50	.00	14.00	17.93	4.50	27.25	43.3	20.6
4	WILLIAMS	1.75	158.25	.00	12.25	16.80	4.25	40.00	43.1	20.8
12	FRANKLIN	1.50	154.50	.00	15.75	16.58	4.75	16.25	43.8	21.9
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE AROUND 1										
NODULE AROUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT HEIGHT										
LODGING										
SHATTER										
HARVEST										
PLANTS PER										
POD										
100 SEED										
QUALITY										
PERCENT										
GERM.										

TABLE 127

EXPERIMENT 225

YEAR 1978

REGION - SOUTH AMERICA
 SITE - PERGAMINO
 LATITUDE - 34 DEG. S
 COOPERATOR - NORA MANCUSO
 DATE PLANTED - NOVEMBER 29, 1978
 SOIL PH - 5.8
 LOCAL VARIETIES - HALESOY 71 CA, HOOD

COUNTRY - ARGENTINA
 ELEVATION - 65 M
 LONGITUDE - 61 DEG. W

DATE HARVESTED -- MARCH, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING	
4	HOOD	3174.00	78.00	145.50	.00	.00	.00	.00	80.00	1.00	
12	COLUMBUS	3094.65	40.75	120.00	.00	.00	.00	.00	65.00	1.00	
14	HALES0Y 71 CA	2876.44	76.50	146.50	.00	.00	.00	.00	86.25	1.00	
5	MITCHELL	2864.53	42.00	106.25	.00	.00	.00	.00	63.50	1.00	
2	CALLAND	2769.31	36.75	100.50	.00	.00	.00	.00	60.25	1.00	
15	CRAWFORD	2570.94	42.25	105.00	.00	.00	.00	.00	59.75	1.00	
3	FRANKLIN	2519.36	40.00	107.75	.00	.00	.00	.00	55.00	1.00	
1	WILLIAMS	2301.15	38.25	102.50	.00	.00	.00	.00	57.00	1.00	
13	UNION	2301.15	38.00	103.25	.00	.00	.00	.00	48.75	1.00	
11	ELF	1916.30	38.75	103.25	.00	.00	.00	.00	37.75	1.00	
9	HARCOR	1368.79	31.00	100.00	.00	.00	.00	.00	43.00	1.00	
8	STEELE	1227.94	28.00	89.00	.00	.00	.00	.00	39.75	1.00	
16	EVANS	989.89	28.75	79.75	.00	.00	.00	.00	40.50	1.00	
7	SWIFT	972.04	27.75	95.00	.00	.00	.00	.00	39.25	1.00	
10	HODGSON	964.10	31.75	88.75	.00	.00	.00	.00	42.50	1.00	
6	ALTONA	706.21	26.25	68.75	.00	.00	.00	.00	35.50	1.00	
GRAND MEAN		2038.55	40.30	103.70	.00	.00	.00	.00	53.36	1.00	
STANDARD ERROR OF A VARIETY MEAN		120.34	1.35	.61	.00	.00	.00	.00	3.02	.00	
COEFFICIENT OF VARIATION		11.81%	6.70%	1.18%	.00%	.00%	.00%	.00%	11.32%	.00%	
5% LSD VARIETY MEANS (*****=NS)		342.77	3.84	1.75	.00	.00	.00	.00	8.60	.00	
C O R R E L A T I O N S											
YIELD		1.00									
DAYS TO FLOWER		.66++									
DAYS TO MATURITY		.77++	.66++								
NODULE ABUND 1		.92++	1.00	.92++							
NODULE ABUND 2		.00	.00	.00	1.00						
NODULE ACT. 1		.00	.00	.00	.00	1.00					
NODULE ACT. 2		.00	.00	.00	.00	.00	1.00				
PLANT		.79++	.83++	.85++	.00	.00	.00	1.00	.00	.00	
LODGING		.00	.00	.00	.00	.00	.00	.00	.00	.00	
SHATTER		-.45++	-.54++	-.49++	.00	.00	.00	.00	.00	.00	
HARVEST		-.01	-.10	-.07	.00	.00	.00	.00	.00	.00	
PODS PER PLANT		.65++	.75++	.77++	.00	.00	.00	.00	.00	.00	
POD WEIGHT		.56++	.79++	.72++	.00	.00	.00	.00	.78++	.00	
100 SEED WEIGHT		.49++	.07	.17	.00	.00	.00	.00	.74++	.00	
QUALITY OF SEED		-.79++	-.68++	-.72++	.00	.00	.00	.00	.18	.00	
PERCENT GERM.		.83++	.56++	.67++	.00	.00	.00	.00	-.74++	.00	
									.63++	.00	

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TABLE 127 EXPERIMENT 225 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
4	HOOD	1.00	176.25	37.25	12.80	17.18	1.75	97.75	37.4	19.5
12	COLUMBUS	1.75	241.75	29.93	7.30	17.35	2.00	93.25	39.7	19.8
14	HALESOD 71 CA	1.00	199.25	38.63	13.45	14.88	1.75	98.75	38.6	18.2
5	MITCHELL	1.75	195.50	27.10	7.53	18.85	2.75	94.00	38.6	19.9
2	CALLAND	2.00	206.00	20.15	7.25	19.45	3.25	97.25	37.0	21.1
15	CRAWFORD	1.75	136.75	29.35	8.65	17.88	2.75	97.25	39.6	20.2
3	FRANKLIN	1.50	194.00	21.50	7.43	18.23	3.50	94.00	38.0	19.8
1	WILLIAMS	1.75	173.00	25.98	5.73	19.83	2.75	94.00	40.9	21.8
13	UNION	1.25	186.25	15.40	8.28	19.58	2.50	98.50	40.2	21.0
11	ELF	2.00	174.00	18.35	5.30	19.43	3.50	95.25	40.9	19.9
9	HARCOR	3.25	172.75	22.60	3.23	15.23	4.50	70.25	41.0	19.2
8	STEELE	2.00	176.25	13.00	7.48	19.18	3.50	79.50	40.1	20.0
16	EVANS	2.75	192.75	18.50	5.73	13.65	5.00	63.25	40.3	20.4
7	SWIFT	2.50	218.75	12.55	6.60	13.23	5.00	54.25	38.9	19.9
10	HODGSON	1.75	194.25	14.43	6.45	16.60	4.25	62.50	41.6	18.3
6	ALTONA	2.00	225.75	14.70	5.30	13.63	4.00	42.00	41.6	17.0
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	-.45++	-.01	.65++	.56++	.49++	-.79++	.83++		
DAYS TO	FLOWER	-.54++	-.10	.75++	.79++	.07	-.68++	.56++		
DAYS TO	MATURITY	-.49++	-.07	.77++	.72++	.17	-.72++	.67++		
NODULE	ABUND 1	.00	.00	.00	.00	.00	.00	.00		
NODULE	ABUND 2	.00	.00	.00	.00	.00	.00	.00		
NODULE	ACT. 1	.00	.00	.00	.00	.00	.00	.00		
NODULE	ACT. 2	.00	.00	.00	.00	.00	.00	.00		
PLANT	HEIGHT	-.57++	.00	.78++	.74++	.18	-.74++	.63++		
	LODGING	.00	.00	.00	.00	.00	.00	.00		
	SHATTER	1.00	-.01	-.39++	-.63++	-.31+	.61++	-.47++		
PLANTS	HARVEST	-.01	1.00	-.09	.03	-.23	.03	-.22		
PODS PER	PLANT	-.39++	-.09	1.00	.49++	.07	-.58++	.53++		
POD	HEIGHT	-.63++	.03	.49++	1.00	.07	-.66++	.45++		
100 SEED	WEIGHT	-.31+	-.23	.07	.07	1.00	-.42++	.68++		
QUALITY	OF SEED	.61++	.03	-.58++	-.66++	-.42++	1.00	-.69++		
PERCENT	GERM.	-.47++	-.22	.53++	.45++	.68++	-.69++	1.00		

TABLE 128

EXPERIMENT 155

YEAR 1978

REGION - SOUTH AMERICA
 SITE - ABAPO IZOZOG
 LATITUDE - 18 DEG. 39 MIN. S
 COOPERATOR - JUAN BELLOTT MONTALVO
 DATE PLANTED - NOVEMBER 15, 1978
 SOIL PH 6.9
 AMOUNT OF MOISTURE - 642.5 MM
 NUMBER OF IRRIGATIONS - 1 (70 MM)
 SUBSTITUTE VARIETY - PELICAN

COUNTRY - BOLIVIA
 ELEVATION - 389 M
 LONGITUDE - 63 DEG. 1 MIN. W
 DATE HARVESTED - FEBRUARY, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
11	CALLAND	5153.53	29.00	99.25	.00	.00	.00	.00	68.93	1.00
3	BOSSIER	4792.62	45.00	123.00	.00	.00	.00	.00	68.93	1.00
7	JAMES	4676.77	33.00	94.25	.00	.00	.00	.00	72.70	1.00
14	MITCHELL	4649.26	30.50	92.75	.00	.00	.00	.00	70.63	1.00
9	DAVIS	4634.26	35.75	104.75	.00	.00	.00	.00	54.83	1.00
5	RANSOM	4526.32	34.00	103.25	.00	.00	.00	.00	49.05	1.00
4	WILLIAMS	4492.56	29.25	92.50	.00	.00	.00	.00	64.63	1.00
12	FRANKLIN	4430.89	29.00	92.25	.00	.00	.00	.00	65.38	1.00
13	CUTLER 71	4389.63	29.00	93.50	.00	.00	.00	.00	64.68	1.00
2	RILLITO	4284.19	34.00	103.75	.00	.00	.00	.00	87.10	2.00
16	CRAWFORD	4118.74	29.75	94.00	.00	.00	.00	.00	69.65	1.00
10	GASOY 17	4092.48	33.50	102.25	.00	.00	.00	.00	38.13	1.00
6	COBB	3621.56	34.00	103.75	.00	.00	.00	.00	51.33	1.00
15	PELICAN	3208.97	54.50	133.00	.00	.00	.00	.00	92.55	5.00
8	FORREST	2787.22	34.00	104.00	.00	.00	.00	.00	44.35	1.00
1	IMPROVED PELICAN	2750.55	45.75	125.50	.00	.00	.00	.00	132.83	4.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		4163.10	35.00	103.86	.00	.00	.00	.00	68.48	1.50
COEFFICIENT OF VARIATION		300.75	.28	.35	.00	.00	.00	.00	2.21	.00
5% LSD VARIETY MEANS (*****NS)		14.45%	1.57%	.68%	.00%	.00%	.00%	.00%	6.46%	.00%
		856.67	.78	1.00	.00	.00	.00	.00	6.30	.00
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	-.41++	-.41++	.00	.00	.00	.00	-.23	-.49++
DAYS TO FLOWER		-.41++	1.00	1.00	.00	.00	.00	.00	.82++	.82++
DAYS TO MATURITY		-.41++	.97++	1.00	.00	.00	.00	.00	.51++	.79++
NODULE ABUND 1		.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	1.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	1.00	.00	.00
NODULE PLANT		.00	.00	.00	.00	.00	.00	.00	.00	.00
HEIGHT		-.23	.51++	.51++	.00	.00	.00	.00	1.00	.74++
LODGING		-.49++	.82++	.79++	.00	.00	.00	.00	.74++	1.00
SHATTER		-.11	.54++	.46++	.00	.00	.00	.00	.09	.48++
PLANTS HARVEST		.48++	-.57++	-.57++	.00	.00	.00	.00	-.33++	-.49++
PODS PER PLANT		-.44++	.93++	.91++	.00	.00	.00	.00	.69++	.93++
POD HEIGHT		.21	.24	.20	.00	.00	.00	.00	.62++	.28++
100 SEED WEIGHT		.50++	-.86++	-.84++	.00	.00	.00	.00	-.70++	-.88++
QUALITY OF SEED		-.54++	.52++	.56++	.00	.00	.00	.00	.43++	.61++
PERCENT GERM.		.09	-.46++	-.53++	.00	.00	.00	.00	.02	-.26+

TABLE 128 EXPERIMENT 155 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
11	CALLAND	1.00	200.75	29.45	6.75	23.65	2.25	81.75	42.3	20.9
3	BOSSIER	1.00	126.75	78.13	7.50	19.88	2.00	77.00	43.1	19.7
7	JAMES	1.00	180.75	32.78	7.18	22.98	2.00	87.25	42.8	22.2
14	MITCHELL	1.00	132.50	34.23	6.25	20.08	2.00	91.25	39.1	21.8
9	DAVIS	2.00	144.50	62.03	4.83	22.58	2.00	69.75	41.7	22.3
5	RANSON	1.00	136.25	30.83	4.18	21.18	2.00	80.50	42.9	22.6
4	WILLIAMS	1.00	196.00	27.53	5.13	23.25	2.00	87.75	42.0	21.6
12	FRANKLIN	1.00	194.50	26.18	5.60	23.43	2.00	82.50	41.7	22.3
13	CUTLER 71	1.00	200.00	31.28	7.10	23.65	2.00	95.00	40.9	21.2
2	RILLITO	1.00	95.50	63.35	5.03	20.10	2.00	78.75	41.6	21.4
16	CRAWFORD	1.00	126.50	34.95	6.03	22.03	2.00	91.50	41.8	22.3
10	GASOY 17	1.00	136.50	38.75	3.35	22.78	2.00	75.00	40.9	21.0
6	COBB	1.00	159.00	40.45	3.53	20.03	2.00	78.25	40.3	21.4
15	PELICAN	2.00	93.75	159.38	6.43	14.40	2.75	76.25	44.0	20.5
8	FORREST	1.00	112.00	32.90	3.53	21.68	3.00	80.25	41.4	22.6
1	IMPROVED PELICAN	1.00	96.25	132.35	7.28	14.30	3.00	78.00	42.3	21.7
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	-.11	.48++	-.44++	.21	.50++	-.54++	.09		
DAYS TO FLOWER		.54++	-.57++	.93++	.24	-.86++	.52++	-.46++		
DAYS TO MATURITY		.46++	-.57++	.91++	.20	-.84++	.56++	-.53++		
NODULE ABUND 1		.00	.00	.00	.00	.00	.00	.00		
NODULE ABUND 2		.00	.00	.00	.00	.00	.00	.00		
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00		
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00		
NODULE PLANT		.00	.00	.00	.00	.00	.00	.00		
LODGING	HEIGHT	.09	-.33++	.69++	.62++	-.70++	.43++	.02		
SHATTER		.48++	-.49++	.93++	.28+	-.88++	.61++	-.26+		
HARVEST		1.00	-.23	.56++	.01	-.33++	.18	-.43++		
PLANTS		-.23	1.00	-.57++	.11	.64++	-.39++	.41++		
PODS PER PLANT		.56++	-.57++	1.00	.30+	-.89++	.54++	-.39++		
POD	HEIGHT	.01	.11	.30+	1.00	-.22	.02	.31+		
100 SEED	WEIGHT	-.33++	.64++	-.89++	-.22	1.00	-.58++	.30+		
QUALITY	OF SEED	.18	-.39++	.54++	.02	-.58++	1.00	-.27+		
PERCENT	GERM.	-.43++	.41++	-.39++	.31+	.30+	-.27+	1.00		

TABLE 129

EXPERIMENT 167

YEAR 1978

REGION - SOUTH AMERICA
 SITE - SANTA CRUZ
 LATITUDE - 17 DEG. 14 MIN. S
 COOPERATORS - H. ZURITA, D. KIDMAN AND A. TEJERINA
 DATE PLANTED - NOVEMBER 22, 1978
 SOIL PH - 6.5
 AMOUNT OF MOISTURE - 1136 MM
 LOCAL VARIETIES - PELICAND, ACADIAN

COUNTRY - BOLIVIA
 ELEVATION - 320 M
 LONGITUDE - 63 DEG. 10 MIN. W
 DATE HARVESTED - MARCH, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
15	BRAGG	3285.24	26.00	117.25	.00	.00	.00	.00	45.75	1.00
3	BOSSIER	3274.40	42.00	120.00	.00	.00	.00	.00	68.75	1.00
9	DAVIS	2851.40	29.00	109.00	.00	.00	.00	.00	54.25	1.00
2	RILLITO	2818.06	29.00	104.00	.00	.00	.00	.00	76.50	1.75
16	CRAWFORD	2702.21	26.00	96.50	.00	.00	.00	.00	75.00	1.00
10	GASOY 17	2659.28	26.00	113.25	.00	.00	.00	.00	38.25	1.25
4	WILLIAMS	2652.20	26.00	96.50	.00	.00	.00	.00	68.75	1.00
6	COBB	2648.45	45.00	131.00	.00	.00	.00	.00	48.75	1.00
5	RANSOM	2618.44	29.00	120.00	.00	.00	.00	.00	42.25	1.00
8	FORREST	2493.83	29.00	109.00	.00	.00	.00	.00	46.25	1.00
12	FRANKLIN	2406.31	26.00	95.00	.00	.00	.00	.00	68.25	1.00
14	MITCHELL	2395.90	31.75	96.50	.00	.00	.00	.00	71.75	1.00
13	ACADIAN	2132.51	43.25	139.00	.00	.00	.00	.00	142.75	3.25
7	JAMES	2131.68	26.00	95.00	.00	.00	.00	.00	83.75	1.00
11	PELICAND	1937.89	56.00	139.00	.00	.00	.00	.00	129.75	2.25
1	IMPROVED PELICAN	1697.01	47.00	139.00	.00	.00	.00	.00	131.25	2.25
GRAND MEAN		2544.05	33.56	113.75	.00	.00	.00	.00	74.50	1.36
STANDARD ERROR OF A VARIETY MEAN		156.54	2.10	1.01	.00	.00	.00	.00	3.03	.14
COEFFICIENT OF VARIATION		12.31%	12.51%	1.77%	.00%	.00%	.00%	.00%	8.14%	20.38%
5% LSD VARIETY MEANS (*****=NS)		445.90	5.98	2.86	.00	.00	.00	.00	8.63	.39

C O R R E L A T I O N S									
YIELD	KG/HA	+	-	PROB=	.05	++	-	PROB=	.01
DAYS TO FLOWER	1.00								
DAYS TO MATURITY	-.35++	1.00							
NODULE ABUND 1	-.26+	.78++	1.00						
NODULE ABUND 2	.00	.00	.00	1.00					
NODULE ACT. 1	.00	.00	.00	.00	1.00				
NODULE ACT. 2	.00	.00	.00	.00	.00	1.00			
PLANT HEIGHT	-.56++	.63++	.49++	.00	.00	.00	1.00		
LODGING	-.41++	.56++	.64++	.00	.00	.00	.00	1.00	
SHATTER	.14	-.10	-.13	.00	.00	.00	.00	.00	1.00
HARVEST	.28+	-.39++	-.29+	.00	.00	.00	.00	.00	.82++
PLANTS PER	-.35++	.44++	.53++	.00	.00	.00	.00	.00	1.00
PODS PER	-.40++	.66++	.56++	.00	.00	.00	.00	.00	.82++
100 SEED WEIGHT	.33++	-.43++	-.36++	.00	.00	.00	.00	.00	.82++
QUALITY OF SEED	-.25+	.05	-.08	.00	.00	.00	.00	.00	.82++
PERCENT GERM.	.19	.39++	.55++	.00	.00	.00	.00	.00	.82++

TABLE 129

EXPERIMENT

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
15	BRAGG	1.00	186.25	28.50	6.25	19.35	1.00	87.25	41.7	21.7
3	BOSSIER	1.00	149.00	30.98	11.50	18.33	1.00	87.25	44.4	21.0
9	DAVIS	1.00	152.75	31.43	8.00	18.93	1.25	84.00	40.9	23.3
2	RILLITO	1.00	101.50	36.48	9.25	15.58	1.00	81.50	42.8	22.5
16	CRAWFORD	1.00	112.25	31.60	7.50	18.28	1.00	78.25	43.5	22.7
10	GASOY 17	1.00	122.50	38.90	6.75	17.85	1.50	83.00	39.7	22.6
4	WILLIAMS	1.00	167.00	25.80	8.00	20.18	1.25	67.00	43.6	22.9
6	COBB	1.00	148.25	30.55	9.75	18.33	1.75	78.25	41.4	22.6
5	RANSOM	1.00	152.50	25.03	5.50	22.30	1.50	70.25	42.8	23.7
8	FORREST	1.00	118.00	42.63	8.25	15.93	1.00	80.25	42.2	21.4
12	FRANKLIN	1.25	166.50	30.28	8.00	19.08	1.75	50.75	41.9	22.5
14	MITCHELL	1.00	140.00	28.33	8.25	19.30	1.50	74.75	42.9	22.4
13	ACADIAN	1.00	107.75	47.73	15.25	15.10	1.00	95.00	43.9	22.3
7	JAMES	1.00	164.50	27.20	9.75	18.68	2.25	55.25	41.9	24.0
11	PELICANO	1.00	70.50	44.85	14.50	15.85	1.50	90.75	44.7	21.1
1	IMPROVED PELICAN	1.00	147.00	41.00	15.00	15.50	1.50	75.25	44.4	21.7
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										

C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	.14	.28+	-.35++	-.40++	.33++	-.25+	.19		
DAYS TO	FLOWER	-.10	-.39++	.44++	.66++	-.43++	.05	.39++		
DAYS TO	MATURITY	-.13	-.29+	.53++	.56++	-.36++	-.08	.55++		
NODULE	ABUND 1	.00	.00	.00	.00	.00	.00	.00		
NODULE	ABUND 2	.00	.00	.00	.00	.00	.00	.00		
NODULE	ACT. 1	.00	.00	.00	.00	.00	.00	.00		
NODULE	ACT. 2	.00	.00	.00	.00	.00	.00	.00		
PLANT	HEIGHT	-.02	-.39++	.52++	.75++	-.55++	.01	.20		
	LODGING	-.07	-.46++	.65++	.61++	-.56++	-.09	.45++		
	SHATTER	1.00	.09	.01	-.05	.17	.14	-.27+		
PLANTS	HARVEST	.09	1.00	-.67++	-.37++	.50++	.24	-.45++		
PODS PER	PLANT	.01	-.67++	1.00	.58++	-.69++	-.14	.44++		
POD	HEIGHT	-.05	-.37++	.58++	1.00	-.59++	.10	.21		
100 SEED	WEIGHT	.17	.50++	-.69++	-.59++	1.00	.14	-.33++		
QUALITY	OF SEED	.14	.24	-.14	.10	.14	1.00	-.38++		
PERCENT	GERM.	-.27+	-.45++	.44++	.21	-.33++	-.38++	1.00		

TABLE 130 EXPERIMENT 153 YEAR 1978

REGION - SOUTH AMERICA COUNTRY - BOLIVIA
 SITE - YACUIBA ELEVATION - 600 M
 LATITUDE - 21 DEG. 57 MIN. S LONGITUDE - 63 DEG. 39 MIN. E
 COOPERATOR - ROBERTO DELGADILLO V. DATE HARVESTED - APRIL, 1979
 DATE PLANTED - DECEMBER 28, 1978 SOIL TYPE - SAND 12.4%, SILT 35.2%, CLAY 52.4%, PH 6
 FERTILIZER USED (KG/HA) - N 25.0, P 20.8, K 11.0
 AMOUNT OF MOISTURE - 1341 MM
 SUBSTITUTE VARIETY - BOSSIER ADAPTADA

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
8	FORREST	4271.69	32.00	106.00	2.50	1.50	76.25	58.25	49.93	1.00
2	RILLITO	3988.30	32.00	101.00	2.00	1.50	83.50	62.75	65.00	2.00
9	DAVIS	3959.12	28.00	111.00	1.75	1.00	85.00	66.75	60.45	1.25
3	BOSSIER	3934.12	38.00	111.00	2.00	1.75	81.25	62.50	57.48	1.25
16	CRAWFORD	3863.27	24.00	94.00	2.50	1.25	75.00	60.00	50.10	1.00
6	BOSSIER ADAPTADA	3788.26	38.00	111.00	1.75	1.25	84.00	63.25	58.43	1.00
10	GASOY 17	3675.73	24.00	106.00	3.50	1.50	76.25	58.50	36.53	1.00
14	MITCHELL	3638.23	24.00	98.00	2.50	2.25	68.00	48.00	54.30	1.00
5	RANSOM	3500.70	24.00	106.00	2.00	1.00	81.25	65.00	36.28	1.00
15	BRAGG	3342.33	28.00	106.00	2.25	1.75	78.75	61.50	42.55	1.00
11	CALLAND	3192.30	24.00	98.00	2.25	1.50	78.25	61.50	59.13	1.00
4	WILLIAMS	3179.80	24.00	94.00	2.75	1.75	74.00	60.00	49.43	1.00
1	IMPROVED PELICAN	3113.12	44.00	111.00	2.50	2.25	78.00	61.75	112.30	2.75
12	FRANKLIN	3058.94	24.00	92.00	3.25	2.75	75.00	62.50	46.98	1.00
7	JAMES	2963.09	24.00	96.00	2.25	2.00	79.00	57.50	56.70	1.00
13	CUTLER 71	2754.72	24.00	88.00	2.25	1.75	77.25	56.25	53.03	1.00
GRAND MEAN		3513.98	28.50	101.81	2.38	1.67	78.17	60.38	55.54	1.20
STANDARD ERROR OF A VARIETY MEAN		182.89	.00	.00	.48	.37	5.17	4.30	3.42	.11
COEFFICIENT OF VARIATION		10.41%	.00%	.00%	40.13%	44.54%	13.23%	14.25%	12.33%	17.86%
5% LSD VARIETY MEANS (*****=NS)		520.95	.00	.00	*****	*****	*****	*****	9.75	.31

C O R R E L A T I O N S									
(+ - PROB=.05					++ - PROB=.01)				
YIELD	KG/HA	DAYS TO	FLOWER	DAYS TO	YIELD	KG/HA	DAYS TO	FLOWER	DAYS TO
YIELD	1.00	.24	.45++	.20	YIELD	.13	.09	.03	.02
DAYS TO	.24	1.00	.70++	-.16	DAYS TO	.17	.14	.67++	.65++
FLOWER	.45++	.70++	1.00	-.23	FLOWER	.22	.23	.26+	.33++
DAYS TO	-.20	-.16	-.23	1.00	DAYS TO	-.72++	-.70++	-.17	-.11
NODULE	-.33++	.02	-.21	.47++	NODULE	-.26+	-.38++	.04	.01
ABUND 1	.13	.17	.22	-.72++	ABUND 1	1.00	.76++	.10	.13
NODULE	.09	.14	.23	-.70++	NODULE	.76++	1.00	.07	.09
ACT. 1	-.03	.67++	.26+	-.17	ACT. 1	.10	.07	1.00	.81++
HEIGHT	.02	.65++	.33++	-.11	HEIGHT	.13	.09	.81++	1.00
LODGING	-.46++	-.63++	-.76++	-.13	LODGING	-.15	-.09	-.26+	-.35++
SHATTER	.01	-.23	-.24	-.12	SHATTER	.05	.01	.07	-.17
HARVEST	.37++	.68++	.77++	-.19	HARVEST	.13	.13	.41++	.48++
PLANTS	.06	.77++	.53++	-.31+	PLANTS	.20	.21	.76++	.58++
PODS PER	-.12	-.49++	-.05	-.11	PODS PER	.03	.10	-.50++	-.45++
100 SEED	-.55++	-.40++	-.71++	-.32+	100 SEED	-.16	-.18	-.23	-.23
QUALITY	.02	-.25+	-.25+	-.10	QUALITY	.05	-.03	.05	-.18
OF SEED					OF SEED				
PERCENT					PERCENT				

TABLE 130 EXPERIMENT 153 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
8	FORREST	1.00	137.50	64.00	8.53	16.30	2.00	78.75	40.0	21.1
2	RILLITO	1.00	92.50	43.00	9.53	18.00	2.00	58.75	41.2	20.6
9	DAVIS	1.00	120.50	59.58	11.40	19.40	1.00	70.75	41.2	20.7
3	BOSSIER	1.00	92.50	73.05	14.65	19.30	2.00	56.75	42.3	20.5
16	CRAWFORD	2.00	92.50	34.33	6.83	19.50	2.00	58.75	41.7	22.3
6	BOSSIER ADAPTADA	1.00	106.25	57.60	15.15	18.90	2.00	64.25	42.3	20.5
10	GASOY 17	2.00	100.75	66.58	6.20	19.80	3.00	63.25	41.0	20.8
14	MITCHELL	1.00	125.00	38.30	7.00	19.00	2.00	72.50	39.1	20.7
5	RANSOM	1.00	114.25	53.00	6.53	21.30	2.00	67.00	41.8	22.9
15	BRAGG	1.00	111.75	48.33	8.90	20.70	2.00	65.50	41.6	21.3
11	CALLAND	2.00	125.00	27.43	12.03	20.10	2.00	72.50	41.8	20.5
4	WILLIAMS	2.00	125.00	28.18	7.75	20.70	3.00	72.50	42.1	23.5
1	IMPROVED PELICAN	1.00	110.00	88.18	18.28	16.70	2.00	65.00	42.4	20.9
12	FRANKLIN	2.00	137.50	29.30	6.73	17.10	4.00	78.75	40.8	23.0
7	JAMES	2.00	137.50	28.45	9.28	19.00	3.00	78.75	40.7	22.8
13	CUTLER 71	2.00	125.00	30.08	8.08	19.00	4.00	72.50	41.1	24.0
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		1.44	115.84	48.08	9.80	19.05	2.38	68.52		
COEFFICIENT OF VARIATION		.00	11.34	5.93	.98	.00	.00	5.24		
5% LSD VARIETY MEANS (*****=NS)		.00	19.58%	24.65%	19.99%	.00%	.00	15.29%		
			32.30	16.88	2.79	.00	.00	14.92		
C O R R E L A T I O N S										
			(+ - PROB=.05		++ - PROB=.01)					
YIELD	KG/HA	-.46++	.01	.37++	.06	-.12	-.55++	.02		
DAYS TO FLOWER		-.63++	-.23	.68++	.77++	-.49++	-.40++	-.25+		
DAYS TO MATURITY		-.76++	-.24	.77++	.53++	-.05	-.71++	-.25+		
NODULE ABUND 1		.13	-.12	-.19	-.31+	-.11	.19	-.10		
NODULE ABUND 2		.12	.04	-.21	-.09	-.27+	.32+	.03		
NODULE ACT. 1		-.15	.05	.13	.20	.03	-.16	.05		
NODULE ACT. 2		-.09	.01	.13	.21	.10	-.18	-.03		
PLANT	HEIGHT	-.26+	.07	.41++	.76++	-.50++	-.23	.05		
LODGING		-.35++	-.17	.48++	.58++	-.45++	-.23	-.18		
SHATTER		1.00	.16	-.56++	-.38++	.17	.71++	.19		
HARVEST		.16	1.00	-.26+	-.05	-.14	.23	.99++		
PLANTS PER PLANT		-.56++	.26+	1.00	.44++	-.26+	-.41++	-.27+		
POD	HEIGHT	-.38++	-.05	.44++	1.00	-.36++	-.09	-.09		
100 SEED	WEIGHT	.17	-.14	-.26+	-.26+	1.00	-.12	-.15		
QUALITY OF SEED		.71++	.23	-.41++	-.36++	-.12	1.00	.24		
PERCENT	GERM.	.19	.99++	-.27+	-.09	-.15	.24	1.00		

TABLE 131 EXPERIMENT 154 YEAR 1978

REGION - SOUTH AMERICA
 SITE - CRUZ ALTA
 LATITUDE - 28 DEG, 38 MIN. S
 COOPERATOR - LUIZ PEDRO BONETTI
 DATE PLANTED - NOVEMBER 7, 1978
 SOIL TYPE - SAND 28.7%, SILT 15.3%, CLAY 56%
 FERTILIZER USED (KG/HA) - N 10.0, P 30.8, K 41.5
 AMOUNT OF MOISTURE - 813 MM

COUNTRY - BRAZIL
 ELEVATION - 473 M
 LONGITUDE - 53 DEG, 37 MIN. W

DATE HARVESTED - FEBRUARY, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
10	GASOY 17	2977.68	56.00	155.00	.00	.00	.00	.00	72.50	1.00
5	RANSOM	2765.14	50.00	154.00	.00	.00	.00	.00	60.00	1.00
6	COBB	2700.54	63.00	166.00	.00	.00	.00	.00	78.75	1.00
2	RILLITO	2698.46	53.00	154.00	.00	.00	.00	.00	77.50	1.00
15	BAGG	2569.26	55.00	154.00	.00	.00	.00	.00	75.00	1.00
9	DAVIS	2490.08	61.00	153.00	.00	.00	.00	.00	71.25	1.00
3	BOSSIER	2440.07	63.00	160.00	.00	.00	.00	.00	78.75	1.00
8	FORREST	2204.61	47.00	152.00	.00	.00	.00	.00	68.75	1.00
1	IMPROVED PELICAN	2054.58	83.00	169.00	.00	.00	.00	.00	108.75	2.00
16	CRAWFORD	1306.51	31.00	103.00	.00	.00	.00	.00	55.00	1.00
4	WILLIAMS	1093.97	25.00	93.00	.00	.00	.00	.00	47.50	1.00
14	MITCHELL	1075.21	31.00	103.00	.00	.00	.00	.00	51.25	1.00
13	CUTLER 71	983.53	28.00	100.00	.00	.00	.00	.00	55.00	1.00
11	GALLAND	941.85	25.00	93.00	.00	.00	.00	.00	46.25	1.00
12	FRANKLIN	906.43	29.00	100.00	.00	.00	.00	.00	51.25	1.00
7	JAMES	843.92	35.00	142.00	.00	.00	.00	.00	50.00	1.00
GRAND MEAN		1878.24	45.94	134.44	.00	.00	.00	.00	65.47	1.06
STANDARD ERROR OF A VARIETY MEAN		123.13	.00	.00	.00	.00	.00	.00	1.73	.00
COEFFICIENT OF VARIATION		13.11%	.00%	.00%	.00%	.00%	.00%	.00%	5.27%	.00%
5% LSD VARIETY MEANS (*****=NS)		350.71	.00	.00	.00	.00	.00	.00	4.92	.00

CORRELATIONS (+ - PROB=.05 +- - PROB=.01)

YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
1.00	.76++	.82++	.00	.00	.00	.00	.66++	.06
.76++	1.00	.91++	.00	.00	.00	.00	.94++	.57++
.82++	.91++	1.00	.00	.00	.00	.00	.80++	.31+
.00	.00	.00	1.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	1.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	1.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	1.00	.00	.00
.06	.94++	.80++	.00	.00	.00	.00	1.00	.68++
.06	.57++	.31+	.00	.00	.00	.00	.68++	1.00
-.53++	-.47++	-.48++	.00	.00	.00	.00	-.44++	-.14
-.29+	-.26+	-.33++	.00	.00	.00	.00	-.21	.12
.68++	.81++	.73++	.00	.00	.00	.00	.79++	.39++
.41++	.67++	.59++	.00	.00	.00	.00	.69++	.43++
.25+	-.05	.15	.00	.00	.00	.00	-.18	-.40++
-.86++	-.77++	-.78++	.00	.00	.00	.00	-.69++	-.18
.77++	.67++	.62++	.00	.00	.00	.00	.61++	.21

TABLE 131 EXPERIMENT 154 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
10	GASOY 17	1.00	201.50	32.25	14.25	15.85	2.00	93.00
5	RANSOM	1.00	192.25	21.25	10.00	18.65	1.00	90.50
6	COBB	1.25	197.75	44.00	12.75	15.13	2.25	93.25
2	RILLITO	1.00	149.25	34.00	17.50	15.13	1.50	93.25
15	BRAGG	1.00	238.00	25.25	15.00	17.25	1.50	89.50
9	DAVIS	1.00	169.00	34.25	15.25	17.63	2.25	85.50
3	BOSSIER	1.00	158.25	38.75	19.75	14.50	1.00	94.00
8	FORREST	1.00	146.00	31.75	11.75	19.15	3.50	72.75
1	IMPROVED PELICAN	1.00	223.75	44.25	19.50	12.83	2.00	92.25
16	CRAWFORD	1.25	177.25	15.75	9.75	17.98	3.75	77.00
4	WILLIAMS	1.75	264.25	13.50	10.50	13.33	3.50	84.75
14	MITCHELL	1.25	178.50	20.75	10.25	16.88	5.00	51.00
13	CUTLER 71	1.50	220.75	20.50	11.50	13.78	4.25	55.25
11	CALLAND	1.50	236.00	12.75	12.00	14.68	5.00	72.50
12	FRANKLIN	1.50	252.25	15.25	11.00	15.48	4.75	34.75
7	JAMES	1.50	226.00	13.25	14.00	15.93	4.50	46.50
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN		1.22	201.92	26.09	13.42	15.88	2.98	76.61
COEFFICIENT OF VARIATION		.19	17.00	3.07	1.00	.44	.21	2.07
5% LSD VARIETY MEANS (*****=NS)		31.63%	16.84%	23.53%	14.90%	5.50%	13.86%	5.41%
		*****	48.43	8.74	2.85	1.25	.59	5.90
C O R R E L A T I O N S								
			(+ - PROB=.05		++ - PROB=.01)			
YIELD	KG/HA	-.53++	-.29+	.68++	.41++	.25+	-.86++	.77++
DAYS TO FLOWER		-.47++	-.26+	.81++	.67++	-.05	-.77++	.67++
DAYS TO MATURITY		-.48++	-.33++	.73++	.59++	.15	-.78++	.62++
NODULE ABUND 1		.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00
PLANT	HEIGHT	-.44++	-.21	.79++	.69++	-.18	-.69++	.61++
LODGING		-.14	.12	.39++	.43++	-.40++	-.18	.21
SHATTER		1.00	.22	-.32++	-.27+	-.31+	.47++	-.29+
HARVEST		.22	1.00	-.39++	-.04	-.23	.26+	-.21
PLANTS PER PLANT		-.32++	-.39++	1.00	.51++	-.12	-.60++	.57++
POD HEIGHT		-.27+	-.04	.51++	1.00	-.27+	-.51++	.40++
100 SEED WEIGHT		-.31+	-.23	-.12	-.27+	1.00	-.07	-.04
QUALITY OF SEED		.47++	.26+	-.60++	-.51++	-.07	1.00	-.80++
PERCENT GERM.		-.29+	-.21	.57++	.40++	-.04	-.80++	1.00

TABLE 132 EXPERIMENT 61 YEAR 1978

REGION - SOUTH AMERICA COUNTRY - BRAZIL
 SITE - DOURADOS ELEVATION - 345 M
 LATITUDE - 22 DEG. 8 MIN. S LONGITUDE - 54 DEG. 22 MIN. W
 DATE PLANTED - NOVEMBER 9, 1978 DATE HARVESTED - MARCH, 1979
 SOIL TYPE - SAND 51%, SILT 3%, CLAY 46%, PH 5.5
 FERTILIZER USED (KG/HA) - N 25.0, P 77.2, K 44.0
 AMOUNT OF MOISTURE - 1260 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
7	TUNIA	4323.78	54.00	156.50	.00	.00	.00	.00	119.40	.00
12	BOSSIER	4029.97	54.00	170.50	.00	.00	.00	.00	82.05	.00
16	GASOY 17	3764.50	48.50	177.00	.00	.00	.00	.00	40.43	.00
15	COBB	3732.00	55.00	190.00	.00	.00	.00	.00	65.93	.00
14	RANSOM	3121.46	42.00	189.00	.00	.00	.00	.00	43.28	.00
11	RILLITO	2781.81	54.00	159.00	.00	.00	.00	.00	107.98	.00
2	UFV-1	2005.82	69.25	192.25	.00	.00	.00	.00	93.38	.00
4	HARDEE LS	1708.67	71.00	192.00	.00	.00	.00	.00	120.20	.00
1	CH-3	1604.49	54.50	190.25	.00	.00	.00	.00	166.58	.00
3	SJ-2	1602.40	54.00	191.00	.00	.00	.00	.00	134.28	.00
9	JUPITER	1450.29	81.50	194.00	.00	.00	.00	.00	107.65	.00
6	IAC-2	925.18	57.00	191.75	.00	.00	.00	.00	187.75	.00
10	IMPROVED PELICAN	846.00	54.50	193.00	.00	.00	.00	.00	163.43	.00
5	ORBA	477.18	59.75	191.00	.00	.00	.00	.00	152.75	.00
8	CARIBE	460.51	85.00	194.00	.00	.00	.00	.00	165.30	.00
13	WILLIAMS	363.82	32.75	170.75	.00	.00	.00	.00	61.83	.00
GRAND MEAN		2074.87	57.92	183.88	.00	.00	.00	.00	113.26	.00
STANDARD ERROR OF A VARIETY MEAN		491.05	1.92	6.64	.00	.00	.00	.00	7.66	.00
COEFFICIENT OF VARIATION		47.33%	6.62%	7.22%	.00%	.00%	.00%	.00%	13.52%	.00%
5% LSD VARIETY MEANS (*****=NS)		1398.71	5.46	18.90	.00	.00	.00	.00	21.82	.00
C O R R E L A T I O N S										
		(+ - PROB=.05 ++ - PROB=.01)								
YIELD	KG/HA	1.00								
DAYS TO FLOWER		-.23	1.00							
DAYS TO MATURITY		-.23	1.00	-.52++						
NODULE ABUND 1		.00	.32+	.00	1.00					
NODULE ABUND 2		.00	.00	.00	.00	1.00				
NODULE ACT. 1		.00	.00	.00	.00	.00	1.00			
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	1.00		
PLANT HEIGHT		-.52++	.41++	.00	.00	.00	.00	.00	1.00	.00
LODGING		.00	.00	.27+	.00	.00	.00	.00	.00	.00
SHATTER		.00	.00	.00	.00	.00	.00	.00	.00	.00
HARVEST		.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS PER		.00	.00	.00	.00	.00	.00	.00	.00	.00
PODS PER		.01	.42++	-.03	.00	.00	.00	.00	.38++	.00
PLANT HEIGHT		-.41++	.43++	.30+	.00	.00	.00	.00	.57++	.00
100 SEED		.00	.00	.00	.00	.00	.00	.00	.00	.00
QUALITY OF SEED		-.69++	.31+	.55++	.00	.00	.00	.00	.45++	.00
PERCENT		.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 132 EXPERIMENT 61 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
7	TUNIA	.00	.00	81.20	8.33	.00	2.75	.00
12	BOSSIER	.00	.00	59.15	8.98	.00	2.00	.00
16	GASOY 17	.00	.00	43.40	9.50	.00	2.00	.00
15	COBB	.00	.00	38.70	7.95	.00	3.50	.00
14	RANSOM	.00	.00	25.00	7.00	.00	2.50	.00
11	RILLITO	.00	.00	42.83	11.80	.00	2.50	.00
2	UFV-1	.00	.00	68.05	11.90	.00	4.00	.00
4	HARDEE LS	.00	.00	62.73	12.53	.00	5.00	.00
1	CH-3	.00	.00	71.80	12.30	.00	4.00	.00
3	SJ-2	.00	.00	82.95	12.08	.00	4.00	.00
9	JUPITER	.00	.00	64.57	14.25	.00	4.50	.00
6	IAC-2	.00	.00	54.30	20.10	.00	4.50	.00
10	IMPROVED PELICAN	.00	.00	62.93	14.35	.00	4.75	.00
5	ORBA	.00	.00	54.53	15.75	.00	3.75	.00
8	CARIBE	.00	.00	83.58	21.53	.00	5.00	.00
13	WILLIAMS	.00	.00	31.00	7.70	.00	5.00	.00
	GRAND MEAN	.00	.00	57.92	12.25	.00	3.73	.00
	STANDARD ERROR OF A VARIETY MEAN	.00	.00	9.01	2.58	.00	.43	.00
	COEFFICIENT OF VARIATION	.00%	.00%	31.11%	42.07%	.00%	22.87%	.00%
	5% LSD VARIETY MEANS (*****=NS)	.00	.00	25.66	7.34	.00	1.22	.00
C O R R E L A T I O N S								
		(+ - PROB=.05	++ - PROB=.01)					
YIELD	KG/HA	.00	.00	.01	-.41++	.00	-.69++	.00
DAYS TO FLOWER		.00	.00	.42++	.43++	.00	.31+	.00
DAYS TO MATURITY		.00	.00	-.03	.30+	.00	.55++	.00
NODULE AROUND 1		.00	.00	.00	.00	.00	.00	.00
NODULE AROUND 2		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00
PLANT	HEIGHT	.00	.00	.38++	.57++	.00	.45++	.00
LOGGING		.00	.00	.00	.00	.00	.00	.00
SHATTER		1.00	.00	.00	.00	.00	.00	.00
HARVEST		.00	1.00	.00	.00	.00	.00	.00
PLANTS	PLANT	.00	.00	.00	.00	.00	.00	.00
PODS PER	POD	.00	.00	1.00	.15	.00	-.01	.00
100 SEED	WEIGHT	.00	.00	.15	1.00	.00	.43++	.00
QUALITY	OF SEED	.00	.00	.00	.00	1.00	.00	.00
PERCENT	GERM.	.00	.00	-.01	.43++	.00	1.00	.00
		.00	.00	.00	.00	.00	.00	1.00

TABLE 133 EXPERIMENT 108 YEAR 1978

REGION - SOUTH AMERICA COUNTRY - BRAZIL
 SITE - JAIBA ELEVATION - 520 M
 LATITUDE - 14 DEG. 5 MIN. S LONGITUDE - 43 DEG. 5 MIN. W
 COOPERATOR - MERVYN OLSON DATE HARVESTED - NOVEMBER, 1978
 DATE PLANTED - JULY 27, 1978
 SOIL TYPE - SAND 19%, SILT 29%, CLAY 52%, PH 6.3
 FERTILIZER USED (KG/HA) - N 25.0, P 25.0, K 25.0
 AMOUNT OF MOISTURE - 746 MM
 NUMBER OF IRRIGATIONS - 15 (586 MM)

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
10	CALLAND	1920.38	21.25	104.00	2.25	2.25	92.50	97.50	38.35	1.25
12	CUTLER 71	1824.11	22.25	91.50	1.25	1.50	97.50	92.50	40.58	1.00
16	CRAWFORD	1780.36	23.50	94.00	2.00	1.25	90.00	95.00	41.60	1.00
15	COLUMBUS	1775.77	22.75	104.00	1.75	2.50	91.25	92.50	39.65	1.00
13	MITCHELL	1767.02	23.00	90.00	2.25	2.00	97.50	96.25	41.40	1.00
2	RILLITO	1574.48	25.25	93.00	3.00	2.50	95.00	93.75	37.60	1.00
1	IMPROVED PELICAN	1541.14	41.00	113.75	4.00	4.00	92.50	88.75	69.00	1.25
7	FORREST	1459.04	29.50	113.75	3.50	3.50	90.00	90.00	32.13	1.00
4	WILLIAMS	1453.21	23.25	90.00	2.00	2.25	93.75	86.25	34.28	1.25
14	BRAGG	1386.94	25.75	90.00	2.50	3.00	90.00	88.75	29.95	1.00
3	BOSSIER	1336.10	39.00	113.75	1.50	2.25	93.75	93.75	48.98	1.00
8	DAVIS	1305.68	32.75	113.75	2.50	2.75	95.00	86.25	37.63	1.00
9	GASOY 17	1174.40	24.50	92.00	2.50	2.50	97.50	97.50	21.35	1.00
11	FRANKLIN	1115.64	23.75	90.00	2.00	2.25	91.25	95.00	33.30	1.00
5	RANSOM	1048.96	23.00	101.50	2.50	2.50	93.75	91.25	23.95	1.00
6	COBB	975.19	28.25	104.00	2.00	2.00	90.00	97.50	40.60	1.00
GRAND MEAN		1464.90	26.80	99.94	2.34	2.44	93.20	92.66	38.15	1.05
STANDARD ERROR OF A VARIETY MEAN		145.03	.48	2.50	.37	.41	3.65	3.76	2.16	.11
COEFFICIENT OF VARIATION		19.80%	3.58%	5.00%	31.92%	33.98%	7.82%	8.12%	11.30%	21.14%
5% LSD VARIETY MEANS (*****=NS)		413.10	1.36	7.12	1.07	1.18	*****	*****	6.14	*****

CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
1.00	-18	1.00	-.02	-.12	.03	.13	.29+	.05
-.18	1.00	.67++	.28+	.37++	-.03	-.15	.63++	.08
-.09	-.09	1.00	.26+	.31+	-.12	-.12	.41++	.06
-.02	.28+	.26+	1.00	.42++	-.17	-.02	.14	.08
-.12	.37++	.31+	.42++	1.00	-.01	-.41++	.18	.05
.03	-.03	-.12	-.17	-.01	1.00	-.31+	.01	.00
.13	-.15	-.12	-.02	-.41++	-.31+	1.00	-.04	-.15
.29+	.63++	.41++	.14	.18	.01	-.04	1.00	.25+
.05	.08	.06	.08	.05	.00	-.15	.25+	1.00
-.15	-.05	-.20	.06	.08	-.09	.06	.01	.01
-.07	-.20	-.02	-.07	-.12	.09	.13	-.09	.10
.39++	.52++	.22	.36++	.33++	-.02	-.09	.60++	.10
-.03	.56++	.40++	.01	.13	.08	-.17	.65++	.11
.32++	-.68++	-.40++	-.40++	-.43++	.07	.11	-.32++	-.06
-.16	.46++	.68++	.15	.29+	.01	-.07	.39++	.06
.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 133 EXPERIMENT 108 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
10	CALLAND	1.00	260.75	7.00	13.45	26.50	3.50	.00	44.6	20.2
12	CUTLER 71	1.00	253.25	11.40	13.80	25.50	3.25	.00	45.1	20.3
16	CRAWFORD	1.00	244.50	9.00	15.55	25.75	1.75	.00	46.4	19.8
15	COLUMBUS	1.00	247.75	8.45	13.25	24.25	2.50	.00	46.1	20.1
13	MITCHELL	1.75	245.25	9.45	15.15	25.25	2.00	.00	42.9	21.2
2	RILLITO	1.25	243.25	11.30	13.18	21.00	2.00	.00	44.6	20.3
1	IMPROVED PELICAN	1.50	250.75	20.15	18.10	18.75	4.00	.00	46.8	20.7
7	FORREST	1.50	247.00	13.00	13.55	20.25	4.25	.00	45.0	20.8
4	WILLIAMS	1.00	249.00	7.75	13.30	25.00	1.00	.00	44.6	20.8
14	BRAGG	1.00	246.75	9.75	14.90	23.25	1.25	.00	44.2	21.0
3	BOSSIER	1.00	237.50	10.40	20.00	21.25	3.50	.00	47.0	20.9
8	DAVIS	1.00	249.50	7.20	16.10	24.50	3.50	.00	44.4	19.1
9	GASOY 17	1.00	248.25	7.65	9.70	23.00	1.00	.00	43.3	19.7
11	FRANKLIN	3.75	254.25	7.65	11.90	22.50	3.00	.00	44.5	21.4
5	RANSOM	1.00	249.25	6.40	9.70	23.50	3.25	.00	44.1	20.6
6	COBB	1.00	257.25	5.30	18.20	21.75	3.25	.00		
	GRAND MEAN	1.30	249.02	9.49	14.36	23.25	2.69	.00		
	STANDARD ERROR OF A VARIETY MEAN	.14	3.52	1.15	.97	.40	.23	.00		
	COEFFICIENT OF VARIATION	21.36%	2.83%	24.22%	13.50%	3.48%	16.76%	.00%		
	5% LSD VARIETY MEANS (*****=NS)	.39	10.03	3.27	2.76	1.15	.64	.00		
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	-.15	-.07	.39++	-.03	.32++	-.16	.00		
DAYS TO	FLOWER	-.05	-.20	.52++	.56++	-.68++	.46++	.00		
DAYS TO	MATURITY	-.20	-.02	.22	.40++	-.40++	.68++	.00		
NODULE	ABUND 1	.06	-.07	.36++	.01	-.40++	.15	.00		
NODULE	ABUND 2	.08	-.12	.33++	.13	-.43++	.29+	.00		
NODULE	ACT. 1	-.09	.09	-.02	.08	.07	.01	.00		
NODULE	ACT. 2	.06	.13	-.09	-.17	.11	-.07	.00		
PLANT	HEIGHT	.01	-.09	.60++	.65++	-.32++	.39++	.00		
LOGGING		.01	.01	.10	.11	-.06	.06	.00		
SHATTER		1.00	.14	.04	-.11	-.18	.13	.00		
HARVEST		.14	1.00	-.13	-.17	.14	.15	.00		
PLANTS	PER PLANT	.04	-.13	1.00	.22	-.55++	.20	.00		
POD	HEIGHT	-.11	-.17	.22	1.00	-.22	.30+	.00		
100 SEED	WEIGHT	-.18	.14	-.55++	-.22	1.00	-.35++	.00		
QUALITY	OF SEED	.13	.15	.20	-.30+	-.35++	1.00	.00		
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	1.00		

TABLE 134 EXPERIMENT 221 YEAR 1978

REGION - SOUTH AMERICA
 SITE - SANTIAGO
 LATITUDE - 33 DEG. 42 MIN. S
 COOPERATORS - P.C. PARODI AND ISABEL M. NEBREDIA
 DATE PLANTED - NOVEMBER 2, 1978
 SOIL PH 7.8
 FERTILIZER USED (KG/HA) - N-45.0, P 45.0
 AMOUNT OF MOISTURE - 80 MM
 NUMBER OF IRRIGATIONS - 9

COUNTRY - CHILE

ELEVATION - 654 M

LONGITUDE - 70 DEG. 35 MIN. W

DATE HARVESTED - APRIL, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
16	CRAWFORD	6781.25	38.50	110.00	.00	.00	.00	.00	84.00	1.25
2	CALLAND	6512.50	51.25	154.00	.00	.00	.00	.00	136.25	4.25
1	WILLIAMS	6221.87	50.75	139.50	.00	.00	.00	.00	135.00	1.75
8	STEELE	5837.50	38.00	119.50	.00	.00	.00	.00	95.25	3.25
4	CUTLER 71	5834.37	50.25	141.50	.00	.00	.00	.00	133.75	3.00
14	CORSOY	5568.75	45.25	132.25	.00	.00	.00	.00	114.25	3.25
9	HARCOR	5500.00	45.25	133.50	.00	.00	.00	.00	119.25	4.25
10	HODGSON	5018.75	40.50	116.00	.00	.00	.00	.00	91.00	2.00
7	SWIFT	4800.00	40.75	112.00	.00	.00	.00	.00	89.00	3.25
13	UNION	4759.37	54.50	140.75	.00	.00	.00	.00	132.50	4.00
11	ELF	4759.37	50.75	147.00	.00	.00	.00	.00	72.50	1.00
6	ALTONA	4721.87	32.75	104.00	.00	.00	.00	.00	65.75	2.25
5	MITCHELL	4218.75	56.00	147.00	.00	.00	.00	.00	138.75	3.25
15	EVANS	3706.25	70.75	151.50	.00	.00	.00	.00	133.75	3.25
3	FRANKLIN	3596.87	54.75	154.00	.00	.00	.00	.00	140.00	4.25
12	COLUMBUS	3450.00	61.50	164.25	.00	.00	.00	.00	133.75	4.75
GRAND MEAN		5080.47	48.84	135.42	.00	.00	.00	.00	113.42	3.06
STANDARD ERROR OF A VARIETY MEAN		246.33	.39	.29	.00	.00	.00	.00	5.80	.34
COEFFICIENT OF VARIATION		9.70%	1.61%	.43%	.00%	.00%	.00%	.00%	10.23%	22.11%
5% LSD VARIETY MEANS (*****=NS)		701.65	1.12	.83	.00	.00	.00	.00	16.53	.96
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	-.50++	-.37++	.00	.00	.00	.00	-.16	-.36++
DAYS TO	FLOWER	-.50++	1.00	.88++	.00	.00	.00	.00	.67++	.35++
DAYS TO	MATURITY	-.37++	.88++	1.00	.00	.00	.00	.00	.71++	.43++
NODULE	ABUND 1	.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE	ABUND 2	.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE	ACT. 1	.00	.00	.00	.00	.00	1.00	.00	.00	.00
NODULE	ACT. 2	.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANT	HEIGHT	-.16	.67++	.71++	.00	.00	.00	.00	1.00	.57++
LODGING		-.36++	.35++	.43++	.00	.00	.00	.00	.57++	1.00
SHATTER		-.05	.03	.15	.00	.00	.00	.00	-.34++	-.36++
HARVEST		.20	-.43++	-.40++	.00	.00	.00	.00	-.36++	-.05
PLANTS	PER	.27+	-.11	-.15	.00	.00	.00	.00	.18	.18
PODS PER	PLANT	.27+	-.11	-.15	.00	.00	.00	.00	.18	.18
POD	HEIGHT	-.46++	.74++	.72++	.00	.00	.00	.00	.64++	.39++
100 SEED	WEIGHT	.51++	-.53++	-.42++	.00	.00	.00	.00	-.31+	-.40++
QUALITY	OF SEED	-.24	.30+	.36++	.00	.00	.00	.00	.17	.17
PERCENT	GERM.	-.32+	-.02	.00	.00	.00	.00	.00	-.07	.18

TABLE 134 EXPERIMENT 221 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
16	CRAWFORD	1.00	149.25	42.13	6.75	15.30	2.00	80.50
2	CALLAND	1.00	142.25	35.68	13.15	17.23	2.00	86.50
1	WILLIAMS	1.00	126.50	37.00	13.15	17.15	1.50	76.50
8	STEELE	1.00	158.50	44.98	6.33	16.93	1.25	97.50
4	CUTLER 71	1.00	136.00	40.05	20.88	15.88	2.00	93.50
14	CORSOY	1.00	155.25	42.73	8.85	15.70	1.50	77.50
9	HARCOR	1.00	143.25	46.63	8.23	14.88	1.00	90.50
10	HODGSON	1.00	147.75	36.15	7.83	16.78	1.50	98.00
7	SWIFT	1.00	180.75	40.20	8.65	15.10	1.50	91.00
13	UNION	1.00	138.00	36.00	14.70	15.95	1.50	92.00
11	ELF	1.75	147.00	24.85	10.68	16.43	2.00	92.00
6	ALTONA	1.00	141.25	30.28	6.53	16.78	1.75	86.00
5	MITCHELL	1.00	115.00	30.75	21.28	15.15	2.50	86.50
15	EVANS	1.00	128.50	39.00	19.30	13.38	1.75	89.00
3	FRANKLIN	1.00	156.00	41.58	17.13	14.60	2.25	98.00
12	COLUMBUS	1.00	125.50	34.68	21.13	10.85	2.75	85.50
	GRAND MEAN	1.05	143.17	37.67	12.77	15.50	1.80	88.78
	STANDARD ERROR OF A VARIETY MEAN	.06	7.81	2.54	1.66	.43	.30	1.14
	COEFFICIENT OF VARIATION	11.94%	10.92%	13.51%	26.05%	5.55%	32.88%	2.56%
	5% LSD VARIETY MEANS (*****=NS)	.18	22.26	7.25	4.74	1.23	.84	3.24

C O R R E L A T I O N S				(+ - PROB=.05		++ - PROB=.01)	
YIELD	KG/HA	-.05	.20	.27+	-.46++	.51++	-.32+
DAYS TO FLOWER		.03	-.43++	-.11	.74++	-.53++	-.02
DAYS TO MATURITY		.15	-.40++	-.15	.72++	-.42++	.30+
NODULE ABUND 1		.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00
PLANT		.00	.00	.00	.00	.00	.00
LODGING		-.34++	-.36++	.18	.64++	-.31+	.17
SHATTER		-.36++	-.05	.23	.39++	-.40++	.17
HARVEST		1.00	.06	-.44++	-.09	-.04	.10
PLANTS PER		.06	1.00	.23	-.45++	.14	.20
POD		-.44++	.23	1.00	-.24	-.21	.07
HEIGHT		-.09	-.45++	-.24	1.00	.48++	.02
100 SEED		.12	.14	-.00	-.45++	1.00	.06
QUALITY OF SEED		-.04	-.17	-.21	.48++	-.37++	1.00
PERCENT		.10	.20	.07	.02	-.05	1.00

TABLE 135

EXPERIMENT 224

YEAR 1978

REGION - SOUTH AMERICA
 SITE - SANTIAGO DE CHILE
 LATITUDE - 33 DEG. 34 MIN. S
 COOPERATOR - VITAL A. VALDIVIA
 DATE PLANTED - OCTOBER 25, 1978
 FERTILIZER USED (KG/HA) - N 0, P 75.0, K 0
 AMOUNT OF MOISTURE - 89.8 MM
 SUBSTITUTE VARIETIES - AMSOY, WELLS

COUNTRY - CHILE
 ELEVATION - 625 M
 LONGITUDE - 70 DEG. 30 MIN. W
 DATE HARVESTED - FEBRUARY, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
9	HARCOR	4948.91	42.25	127.25	4.73	3.00	.00	55.00	110.00	4.50
14	WELLS	4811.38	41.50	122.00	4.63	3.20	.00	51.25	112.50	2.50
16	EVANS	4615.51	36.00	105.00	4.85	2.68	.00	57.50	106.25	3.00
4	AMSOY	4596.75	42.25	121.50	4.78	3.20	.00	67.50	133.75	3.25
5	MITCHELL	4505.07	54.75	146.00	4.88	3.63	.00	43.75	136.25	4.00
10	HODGSON	4490.48	33.75	113.00	4.80	3.48	.00	50.00	97.50	2.25
13	UNION	4257.10	51.00	138.75	4.83	3.48	.00	60.00	152.50	4.25
8	STEELE	4163.33	35.25	113.00	4.78	3.65	.00	41.25	117.50	2.75
11	ELF	4155.00	50.00	127.50	4.88	3.35	.00	45.00	81.25	1.50
1	WILLIAMS	4082.07	49.00	127.75	4.85	3.70	.00	46.25	118.75	3.75
2	CALLAND	3963.29	45.75	140.25	4.95	3.20	.00	48.75	137.50	3.50
7	SWIFT	3375.67	39.75	105.00	4.85	3.23	.00	58.75	110.00	3.50
3	FRANKLIN	3265.24	55.00	143.50	4.85	3.63	.00	36.25	155.00	4.50
15	CRAWFORD	2810.98	61.00	150.50	4.88	3.30	.00	50.00	152.50	4.00
6	ALTONA	2700.54	32.25	92.75	4.95	3.75	.00	43.75	76.25	1.00
12	COLUMBUS	1198.16	60.00	151.25	4.75	3.63	.00	50.00	143.75	4.25
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00								
DAYS TO FLOWER		-.39++								
DAYS TO MATURITY		-.21								
NODULE ABUND 1		-.15								
NODULE ABUND 2		-.32+								
NODULE ACT. 1		.00								
NODULE ACT. 2		-.04								
PLANT		-.17								
LOGGING		.01								
SHATTER		.01								
HARVEST		-.15								
PODS PER PLANT		.23								
POD		-.08								
100 SEED WEIGHT		.64++								
QUALITY OF SEED		-.45++								
PERCENT GERM.		.00								

TABLE 135 EXPERIMENT 224 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT CIL
9	HARCOR	1.00	152.50	49.50	9.25	16.60	2.50	.00	40.9	19.2
14	WELLS	1.00	262.50	35.00	12.15	17.88	2.75	.00	42.2	20.3
16	EVANS	1.00	240.00	38.50	12.55	16.15	2.00	.00	40.9	20.7
4	AMSOY	1.00	170.00	37.25	14.00	17.30	2.50	.00	39.6	19.7
5	MITCHELL	1.25	227.50	39.75	13.70	16.43	2.25	.00	39.7	19.9
10	HODGSON	1.00	222.50	35.50	13.45	18.95	2.50	.00	40.8	20.3
13	UNION	1.00	237.50	34.75	13.80	19.25	2.25	.00	42.1	19.4
8	STEELE	1.00	240.00	35.50	11.75	18.28	2.75	.00	42.1	20.3
11	ELF	1.25	240.00	31.50	12.75	16.63	3.75	.00	42.1	17.7
1	WILLIAMS	1.00	282.50	34.25	14.15	16.75	2.75	.00	41.7	19.4
2	CALLAND	1.00	242.50	30.75	13.50	18.95	2.50	.00	42.1	19.4
7	SWIFT	1.00	220.00	26.00	15.75	16.10	3.25	.00	38.9	19.6
3	FRANKLIN	1.75	270.00	36.00	13.70	13.65	3.75	.00	39.2	17.2
15	CRAWFORD	1.00	177.50	43.50	12.00	14.33	2.25	.00	43.4	17.3
6	ALTONA	1.00	232.50	21.25	9.05	18.18	2.75	.00	42.4	17.0
12	COLUMBUS	1.00	272.50	39.50	13.65	11.65	4.00	.00	43.3	17.3
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		1.08	230.63	35.53	12.83	16.69	2.78	.00		
COEFFICIENT OF VARIATION		.15	20.34	3.36	.80	.53	.26	.00		
5% LSD VARIETY MEANS (*****=NS)		27.05%	17.64%	18.94%	12.51%	6.32%	18.90%	.00%		
		*****	57.94	9.58	2.29	1.50	.75	.00		
C O R R E L A T I O N S										
			(+ - PROB=.05		++ - PROB=.01)					
YIELD	KG/HA	.01	-15	.23	-.08	.64++	-.45++	.00		
DAYS TO FLOWER		.21	.09	.25	.21	-.58++	.27+	.00		
DAYS TO MATURITY		.22	.06	.41++	.16	-.37++	.13	.00		
NODULE ABUND 1		.10	-10	-.26+	.15	-.07	.01	.00		
NODULE ABUND 2		.03	.15	-.14	.10	-.12	.05	.00		
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00		
NODULE ACT. 2		-.22	-.14	.03	-.04	.07	-.02	.00		
HEIGHT		.32++	.02	.37++	.20	-.24	-.01	.00		
LOGGING		.17	.02	.41++	.05	-.23	.03	.00		
SHATTER		1.00	.11	.04	-.06	-.19	.27+	.00		
HARVEST		.11	1.00	-.33++	.15	-.01	.28+	.00		
PLANT		.04	-.33++	1.00	-.10	-.12	-.25+	.00		
PODS PER		-.06	.15	-.10	1.00	-.20	.10	.00		
100 SEED		-.19	-.01	-.12	-.20	1.00	-.40++	.00		
WEIGHT		.27+	.28+	-.25+	.10	-.40++	1.00	.00		
QUALITY		.00	.00	.00	.00	.00	.00	1.00		
PERCENT										

TABLE 136

EXPERIMENT 16

YEAR 1978

REGION -- SOUTH AMERICA
 SITE -- CORDOBA
 LATITUDE -- 8 DEG. 50 MIN. N
 COOPERATORS -- MIGUEL A. MUNOZ & LUIS A. ROJAS M.
 DATE PLANTED -- APRIL 25, 1978
 SOIL TYPE -- FRANCO-ARENOSO, PH 7.5
 SUBSTITUTION VARIETIES -- LINEA-108, LINEA-121
 COUNTRY -- COLOMBIA
 ELEVATION -- 13 M
 LONGITUDE -- 75 DEG. 49 MIN. W
 DATE HARVESTED -- AUGUST, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
3	HARDEE LS	3063.11	34.25	129.00	.00	3.25	.00	.00	83.50	2.00
13	LINEA-121	2750.55	41.00	115.00	.00	3.50	.00	.00	52.75	1.25
12	LINEA-108	2469.24	36.50	129.00	.00	2.25	.00	.00	76.75	2.25
6	TUNIA	2458.82	33.50	104.00	.00	3.75	.00	.00	90.75	1.75
2	UFV-1	2385.89	34.25	115.00	.00	3.75	.00	.00	53.25	1.00
7	JUPITER	2365.06	36.50	115.00	.00	4.00	.00	.00	66.75	1.25
4	ORBA	2195.02	31.00	107.75	.00	3.75	.00	.00	103.25	4.25
10	BOSSIER	1896.21	34.25	100.50	.00	4.00	.00	.00	57.25	1.00
5	IAC-2	1889.13	32.00	115.00	.00	3.25	.00	.00	125.75	3.25
9	RILLITO	1858.70	32.00	104.00	.00	3.00	.00	.00	81.50	1.25
8	IMPROVED PELICAN	1281.51	30.50	104.00	.00	4.00	.00	.00	106.50	2.50
11	WILLIAMS	1083.55	30.00	110.75	.00	3.75	.00	.00	76.75	1.00
1	CH-3	972.28	38.00	112.25	.00	3.25	.00	.00	117.00	4.00
14	GASOY 17	608.45	32.00	116.50	.00	4.00	.00	.00	26.75	1.00
GRAND MEAN		1948.40	33.98	112.70	.00	3.54	.00	.00	79.89	1.98
STANDARD ERROR OF A VARIETY MEAN		203.23	1.97	4.26	.00	.38	.00	.00	4.45	.19
COEFFICIENT OF VARIATION		20.86%	11.61%	7.56%	.00%	21.28%	.00%	.00%	11.15%	19.40%
5% LSD VARIETY MEANS (*****NS)		581.35	5.64	12.19	.00	*****	.00	.00	12.74	.55

C O R R E L A T I O N S										
			+ - PROB=.05		+ + - PROB=.01					
YIELD	KG/HA	1.00								
DAYS TO FLOWER	.24	.17								
DAYS TO MATURITY	.17	.17								
NODULE ABUND 1	.00	.00								
NODULE ABUND 2	-.13	-.23								
NODULE ACT. 1	.00	.00								
NODULE ACT. 2	.00	.00								
PLANT HEIGHT	-.01	-.13								
LODGING	-.09	.03								
SHATTER	.00	.00								
HARVEST	-.27+	-.35++								
PLANTS PER	.53++	.25								
POD HEIGHT	.13	.09								
100 SEED WEIGHT	.04	.12								
QUALITY OF SEED	-.00	-.05								
PERCENT GERM.	-.02	.13								

TABLE 136

EXPERIMENT 16

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	FOD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
3	HARDEE LS	1.00	115.75	74.28	13.25	17.25	3.25	31.50	43.5	25.6
13	LINEA-121	1.00	48.25	86.20	10.25	19.00	3.00	29.00	43.5	25.3
12	LINEA-108	1.00	72.00	109.73	10.50	11.00	3.25	24.75	46.5	20.4
6	TUNIA	1.00	114.50	53.68	10.00	18.00	2.75	27.00	44.9	22.3
2	UFV-1	1.00	131.75	38.00	8.00	16.00	3.25	26.25	46.8	21.7
7	JUPITER	1.00	97.25	61.15	12.25	19.50	2.50	39.25	43.0	26.2
4	ORBA	1.00	140.25	42.28	8.25	15.75	3.00	27.25	46.1	22.1
10	BOSSIER	1.00	143.50	41.00	17.00	17.50	3.00	27.25	42.7	22.4
5	IAC-2	1.00	55.25	95.40	18.75	16.75	3.25	25.25	47.0	23.1
9	RILLITO	1.00	105.00	37.50	10.75	17.75	3.75	23.00	45.5	23.3
8	IMPROVED PELICAN	1.00	118.00	50.73	9.50	14.00	3.50	23.25	46.6	23.2
11	WILLIAMS	1.00	163.00	19.93	9.00	18.00	3.25	29.25	46.3	23.1
1	CH-3	1.00	105.75	35.23	13.75	16.75	2.75	38.75	47.2	20.4
14	GASOY 17	1.00	134.00	15.30	8.50	18.00	3.00	24.75	43.7	23.5
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS										
YIELD KG/HA										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE AROUND 1										
NODULE AROUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT										
PLANTS										
PODS PER PLANT										
FOD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										
YIELD										
DAYS TO FLOWER										
DAYS TO MATURITY										
NODULE AROUND 1										
NODULE AROUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT										
PLANTS										
PODS PER PLANT										
FOD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 137 EXPERIMENT 17 YEAR 1978

REGION - SOUTH AMERICA COUNTRY - COLOMBIA
 SITE - PALMIRA ELEVATION - 1080 M
 LATITUDE - 3 DEG. 32 MIN. N LONGITUDE - 76 DEG. 19 MIN. W
 COOPERATOR - PROGRAMA LEGUMINOSAS DE GRANO Y OLEAGINOSAS ANUALES
 DATE PLANTED - APRIL 7, 1978 DATE HARVESTED - AUGUST, 1978
 SOIL TYPE - SAND 35.0%; SILT 38.0%; CLAY 25.0%, PH 6.8
 AMOUNT OF MOISTURE - 428 MM
 NUMBER OF IRRIGATIONS - 1 (20 MM)
 LOCAL VARIETIES - ICA-CARIBE, ICA-TUNIA

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
10	IMPROVED PELICAN	3183.97	32.00	90.00	1.25	1.00	80.50	100.00	70.00	3.00
7	ICA-TUNIA	3175.63	30.00	95.00	1.00	1.00	82.50	97.50	59.00	1.00
6	IAC-2	2992.26	31.00	95.00	1.00	1.00	84.25	100.00	80.00	5.00
2	UFV-1	2908.91	31.00	98.00	1.25	1.00	82.25	100.00	32.00	1.00
12	BOSSIER	2875.57	31.00	88.00	1.00	1.00	81.75	97.50	52.00	2.00
3	SJ-2	2788.06	34.00	96.00	1.00	1.50	97.50	82.50	73.00	4.00
16	GASDY 17	2517.17	22.00	85.00	1.25	1.00	82.75	97.50	39.00	2.00
1	CH-3	2458.82	32.00	97.00	1.00	1.00	86.50	95.00	94.00	4.00
15	COB	2446.32	24.00	87.00	1.25	1.00	88.25	97.50	34.00	2.00
4	HARDEE LS	2317.13	44.00	101.00	1.00	1.00	96.25	100.00	68.00	3.00
13	WILLIAMS	2296.29	25.00	79.00	1.00	1.00	83.00	100.00	46.00	1.00
14	RANSOM	2296.29	23.00	85.00	1.00	1.00	80.00	100.00	28.00	2.00
9	JUPITER	2129.59	44.00	100.00	1.00	2.50	97.00	80.00	88.00	3.00
11	RILLITO	2054.58	25.00	84.00	1.00	1.00	80.00	100.00	45.00	1.00
8	ICA-CARIBE	1829.53	31.00	98.00	1.75	1.25	76.75	90.00	61.00	2.00
5	ORBA	1700.34	31.00	86.00	1.00	1.00	75.25	100.00	75.00	5.00
GRAND MEAN		2498.16	30.63	91.50	1.11	1.14	84.66	96.09	59.00	2.56
STANDARD ERROR OF A VARIETY MEAN		236.62	.00	.00	.14	.15	4.16	3.20	.00	.00
COEFFICIENT OF VARIATION		18.94%	.00%	.00%	25.42%	26.79%	9.82%	6.66%	.00%	.00%
5% LSD VARIETY MEANS (*****=NS)		673.99	.00	.00	.40	.44	11.84	9.12	.00	.00
C O R R E L A T I O N S										
					(+ - PROB=.05			++ - PROB=.01)		
YIELD	KG/HA	1.00								
DAYS TO FLOWER		-.01		.11	-.20	-.26+	.08	.38++	-.02	-.05
DAYS TO MATURITY		1.00		.79++	-.10	.48++	.40++	-.34++	.69++	.39++
NODULE ABUND 1		-.10		.10	1.00	.00	.34++	-.34++	.54++	.29+
NODULE ABUND 2		-.26+		.34++	.00	1.00	-.24	-.07	-.14	-.15
NODULE ACT. 1		.08		.32++	-.24	.27+	1.00	-.79++	.35++	.13
NODULE ACT. 2		.38++		-.34++	-.07	-.79++	-.21	1.00	.22	.14
PLANT		-.02		.69++	-.14	.35++	.22	-.32++	1.00	-.15
LOGGING		-.05		.39++	-.15	.13	.14	-.15	.74++	.74++
SHATTER		-.38++		.02	.08	-.06	-.29+	-.15	.21	1.00
PLANTS HARVEST		.21		-.23	-.29+	-.07	.11	.05	.21	.43++
PODS PER PLANT		-.04		.36++	-.47++	.26+	.07	.19	-.08	.16
100 SEED WEIGHT		-.06		.82++	-.23	.54++	.37++	-.07	.36++	.19
QUALITY OF SEED		-.04		-.43++	.04	.05	-.08	-.47++	.80++	.56++
PERCENT		.13		.09	.03	.34++	.21	.11	-.41++	-.10
				-.53++	.22	-.11	-.31+	-.02	-.18	.16

TABLE 137

EXPERIMENT 17

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
10	IMPROVED PELICAN	1.00	254.50	43.00	14.25	15.20	1.00	100.00	44.7	2.2
7	ICA-TUNIA	1.00	175.75	44.25	14.00	18.90	2.00	100.00	43.0	22.8
6	IAC-2	1.00	212.00	58.00	13.75	16.30	1.00	100.00	44.5	21.9
2	UFV-1	1.00	169.25	50.00	8.25	14.50	2.00	99.00	45.5	20.3
12	BOSSIER	1.00	219.25	46.00	15.50	11.40	1.00	97.00	44.4	22.2
3	SJ-2	1.00	215.25	52.00	18.00	11.20	2.00	99.00	45.1	20.0
16	GASOY 17	1.00	246.50	26.25	7.25	19.70	2.00	100.00	43.4	20.2
1	CH-3	1.00	200.75	54.50	18.50	12.40	2.00	100.00	45.4	18.7
15	COBB	1.00	219.50	33.50	6.75	20.10	3.00	100.00	42.6	21.9
4	HARDEE LS	1.00	186.75	56.75	18.50	13.10	2.00	92.00	44.9	21.0
13	WILLIAMS	1.00	250.75	27.25	6.75	19.60	2.00	97.00	44.0	22.3
14	RANSOM	1.00	233.75	29.00	6.50	17.50	3.00	99.00	43.0	24.6
9	JUPITER	1.00	195.00	46.75	26.25	18.30	3.00	97.00	42.8	22.9
11	RILLITO	1.00	168.50	50.00	5.75	15.60	1.00	97.00	42.8	22.1
8	ICA-CARIBE	2.00	107.75	96.50	9.25	14.40	2.00	100.00	47.2	18.3
5	ORBA	4.00	216.50	47.25	16.25	14.28	2.00	100.00	42.8	19.3
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS										
YIELD KG/HA										
DAYS TO MATURITY										
NODULE ABUND 1										
NODULE ABUND 2										
NODULE ACT. 1										
NODULE ACT. 2										
PLANT										
LODGING										
SHATTER										
HARVEST										
PLANTS										
PODS PER PLANT										
POD HEIGHT										
100 SEED WEIGHT										
QUALITY OF SEED										
PERCENT GERM.										

TABLE 138

EXPERIMENT 21 YEAR 1978

REGION - SOUTH AMERICA
 SITE - BOLICHE
 COUNTRY - ECUADOR
 LATITUDE - 2 DEG. 15 MIN. S
 ELEVATION - 14 M
 COOPERATOR - EDUARDO MALDONADO ALCIVAR
 LONGITUDE - 79 DEG. 38 MIN. W
 DATE PLANTED - JUNE 6, 1978
 DATE HARVESTED - SEPTEMBER, 1978
 SOIL TYPE - SAND 10%, SILT 10%, CLAY 80%, PH 6.9
 AMOUNT OF MOISTURE - 195 MM
 NUMBER OF IRRIGATIONS - 5 (195 MM)
 LOCAL VARIETIES - ECUADOR 1, ECUADOR 2

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
16	ECUADOR 2	3539.46	37.00	104.00	4.00	3.75	18.25	17.00	67.20	1.50
7	TUNIA	3479.86	31.00	104.00	4.00	2.75	17.50	18.25	58.35	1.25
4	HARDEE LS	3256.07	45.00	113.00	4.00	3.25	15.00	19.25	64.80	1.75
15	ECUADOR 1	3209.81	41.00	104.00	4.00	3.50	15.75	19.25	62.80	1.25
10	IMPROVED PELICAN	2834.73	34.00	94.00	4.00	4.00	17.25	17.50	67.95	1.50
1	CH-3	2755.13	34.00	104.00	4.00	3.75	16.25	16.25	74.40	1.00
2	UFV-1	2710.96	37.00	104.00	4.00	3.75	15.75	17.25	33.60	1.00
14	WILLIAMS	2678.04	27.00	86.00	4.00	3.50	15.75	19.25	48.00	1.00
8	CARIBE	2678.04	31.00	104.00	4.00	3.25	17.00	18.75	61.85	2.50
13	BOSSIER	2650.95	35.00	94.00	4.00	3.50	14.50	18.00	51.10	1.75
9	JUPITER	2647.61	48.00	112.00	4.00	3.75	15.75	16.25	76.25	1.75
3	SJ-2	2645.95	37.00	104.00	4.00	4.00	17.50	16.00	70.05	3.00
6	IAC-2	2607.60	34.00	104.00	4.00	3.50	17.50	19.50	65.25	1.50
12	RILLITO	2356.30	29.00	86.00	4.00	3.00	17.75	18.25	46.25	1.50
5	ORBA	2250.45	34.00	90.00	4.00	3.50	18.25	17.00	64.30	3.50
11	KAHALA	2190.02	27.00	94.00	4.00	4.00	16.50	19.00	28.55	1.00
GRAND MEAN		2780.69	35.06	100.06	4.00	3.55	16.64	17.92	58.79	1.67
STANDARD ERROR OF A VARIETY MEAN		196.63	.25	.37	.00	.27	1.21	.75	2.79	.42
COEFFICIENT OF VARIATION		14.14%	1.43%	.75%	.00%	15.27%	14.49%	8.38%	9.50%	50.30%
5% LSD VARIETY MEANS (*****=NS)		560.09	.71	1.07	.00	*****	*****	2.14	7.96	1.20
CORRELATIONS										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.25	.36++	.00	.01	.02	.27+	.38++	-.05
DAYS TO FLOWER		.25	1.00	.75++	.00	.09	-.18	-.20	.49++	.11
DAYS TO MATURITY		.36++	.75++	1.00	.00	.02	-.11	-.13	.44++	.00
NODULE ABUND 1		.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.01	.09	.02	.00	1.00	-.09	-.02	.19	.08
NODULE ACT. 1		.02	-.18	-.11	.00	-.09	1.00	-.04	.05	.11
NODULE ACT. 2		.27+	-.20	-.13	.00	-.02	-.04	1.00	-.18	-.05
PLANT HEIGHT		.38++	.49++	.44++	.00	.19	.05	-.18	1.00	.40++
LODGING		-.05	.11	.00	.00	.08	.11	-.05	.40++	1.00
SHATTER		-.07	-.08	.01	.00	-.06	.16	-.00	.17	.44++
PLANTS HARVEST		.20	-.21	-.14	.00	.09	.03	-.06	.09	-.02
PODS PER PLANT		.36++	.41++	.43++	.00	.24	.08	.06	.49++	.38++
POD HEIGHT		.16	.29+	.30+	.00	.02	.06	-.26+	.45++	.12
100 SEED WEIGHT		.27+	.06	.07	.00	-.01	-.19	.26+	-.29+	-.30+
QUALITY OF SEED		-.38++	-.13	-.23	.00	-.13	.01	.10	-.05	.13
PERCENT GERM.		.09	.20	-.11	.00	.13	-.01	-.12	-.03	-.17

TABLE 138

(CONTINUED)

EXPERIMENT 21

YEAR 1978

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
16	ECUADOR 2	1.00	212.75	36.15	20.45	20.00	1.50	100.00		
7	TUNIA	1.00	199.75	24.35	17.45	23.23	1.50	99.50	42.2	19.7
4	HARDEE LS	1.00	195.50	32.75	11.40	18.75	1.75	100.00	43.3	20.5
15	ECUADOR 1	1.25	171.50	34.80	11.60	22.78	2.25	100.00	42.9	20.3
10	IMPROVED PELICAN	1.00	211.75	33.73	15.40	15.83	1.25	99.75	43.1	18.3
1	CH-3	1.25	190.50	27.20	12.70	15.78	2.50	100.00	40.8	19.9
2	UFV-1	1.00	168.25	26.88	10.10	20.40	1.25	100.00	41.0	21.7
14	WILLIAMS	1.00	201.00	18.83	9.40	22.83	2.00	100.00	42.4	19.8
8	CARIBE	2.00	197.00	32.20	11.23	15.40	2.00	82.25	47.2	16.4
13	ROSSIER	1.00	196.50	26.65	16.60	20.73	2.00	99.00	43.6	18.1
9	JUPITER	1.00	184.25	28.05	16.10	22.50	1.75	100.00	42.9	20.0
3	SJ-2	1.50	200.00	34.53	16.88	16.28	1.25	100.00	43.9	16.3
6	IAC-2	1.00	185.75	32.40	15.23	18.98	2.00	98.75	43.6	20.2
12	RILLITO	1.00	170.50	24.23	6.65	18.05	2.00	100.00	43.2	19.2
5	ORRA	1.75	210.00	26.25	15.15	22.75	2.75	99.75	40.0	16.4
11	KAHALA	1.00	217.00	22.25	9.00	22.78	2.00	99.50	39.7	19.1
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	-.07	.20	.36++	.16	.27+	-.38++	.09		
DAYS TO	FLOWER	-.08	-.21	.41++	.29+	.06	-.13	.20		
DAYS TO	MATURITY	.01	-.14	.43++	.30+	.07	-.23	-.11		
NODULE	ABUND 1	.00	.00	.00	.00	.00	.00	.00		
NODULE	ABUND 2	-.06	.09	.24	.02	-.01	-.13	.13		
NODULE	ACT. 1	.16	.03	.08	.06	-.19	.01	-.01		
NODULE	ACT. 2	-.00	-.06	.06	-.26+	.26+	.10	-.12		
PLANT	HEIGHT	.17	.09	.49++	.12	-.30+	-.05	-.03		
LODGING		.44++	-.02	.38++	.12	-.30+	.13	-.17		
SHATTER		1.00	.00	.26+	-.01	-.45++	.26+	-.54++		
PLANTS	HARVEST	.00	1.00	-.15	.25+	-.08	-.14	.00		
PODS PER	PLANT	.26+	-.15	1.00	.14	-.22	-.17	-.10		
POD	HEIGHT	-.01	.25+	.14	1.00	-.08	-.12	.11		
100 SEED	WEIGHT	-.45++	-.08	-.22	-.08	1.00	-.14	.31+		
QUALITY	OF SEED	.26+	-.14	-.17	-.12	-.14	1.00	-.06		
PERCENT	GERM.	-.54++	.00	-.10	.11	.31+	-.06	1.00		

TABLE 139

EXPERIMENT 39

YEAR 1978

REGION - SOUTH AMERICA
 SITE - PALLATANGA
 LATITUDE - 1 DEG. 59 MIN. S
 COOPERATOR - INIAP
 DATE PLANTED - AUGUST 24, 1978
 SOIL TYPE - SAND 31%, SILT 45%, CLAY 24%, PH 6.7
 LOCAL VARIETIES - ECUADOR 1, ECUADOR 2

COUNTRY - ECUADOR
 ELEVATION - 1270 M
 LONGITUDE - 78 DEG. 58 MIN. W

DATE HARVESTED - DECEMBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
9	JUPITER	2944.34	135.00	206.00	4.50	4.00	100.00	88.75	75.55	2.00
4	HARDEE LS	2796.39	135.00	206.00	4.50	3.75	70.00	92.50	65.75	2.25
12	RILLITO	2488.00	102.00	171.00	4.25	3.50	75.00	97.50	39.30	1.00
14	WILLIAMS	2227.53	102.00	169.00	4.50	3.75	75.00	95.00	28.85	2.00
11	KAHALA	2175.43	102.50	165.00	4.25	3.50	93.75	92.50	36.00	1.00
10	IMPROVED PELICAN	2146.26	122.00	201.00	4.50	4.00	80.00	98.75	67.60	1.50
2	UFV-1	2112.92	114.50	189.00	4.50	4.00	92.50	92.50	40.25	1.50
7	TUNIA	2002.48	102.50	194.25	4.00	4.00	77.50	96.25	45.75	1.50
16	ECUADOR 2	1942.05	118.25	193.50	4.25	3.75	71.25	97.50	47.90	1.25
13	BOSSIER	1935.80	109.75	169.00	4.25	3.75	92.50	97.50	37.80	1.25
3	SJ-2	1879.54	117.00	193.50	4.50	4.00	75.00	91.25	65.70	1.75
8	CARIBE	1846.20	102.00	176.25	4.25	3.75	83.75	100.00	46.70	1.25
15	ECUADOR 1	1844.12	122.00	196.50	4.50	3.75	100.00	96.25	37.20	1.00
5	ORBA	1839.95	134.50	193.50	4.25	3.75	86.25	95.00	66.95	1.25
1	CH-3	1625.32	111.25	201.00	4.00	3.75	77.50	98.75	75.15	1.75
6	IAC-2	1012.70	110.50	203.50	4.50	3.50	85.00	100.00	52.65	1.75
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.29+	.06	-.28+	-.15	.11	-.27+	.21	.31+
DAYS TO FLOWER		.29+	1.00	.59++	.10	-.01	.18	-.25+	.64++	.18
DAYS TO MATURITY		.06	.59++	1.00	.06	.13	-.00	-.02	.67++	.38++
NODULE ABUND 1		-.28+	.10	.06	1.00	.35++	.06	-.08	-.11	-.12
NODULE ABUND 2		-.15	.01	.13	.35++	1.00	-.08	-.10	-.02	-.06
NODULE ACT. 1		.11	.18	-.00	.06	-.08	1.00	-.01	-.17	-.01
NODULE ACT. 2		-.27+	-.25+	-.02	-.08	-.08	.07	1.00	-.15	-.27+
PLANT		.21	.64++	.18	-.11	-.02	.01	-.15	1.00	.35++
LODGING		.31+	.18	.38++	-.12	-.06	-.17	-.27+	.35++	1.00
SHATTER		.00	.00	.00	.00	.00	.00	.00	.00	.00
HARVEST		.20	-.29+	-.47++	-.22	-.19	-.01	.07	-.11	-.01
PODS PER PLANT		.54++	.32+	.19	-.05	.06	-.16	-.31+	.34++	.38++
POD HEIGHT		.29+	.59++	.54++	.11	.13	.19	-.26+	.67++	.25+
100 SEED WEIGHT		.21	.25	.40++	.02	-.05	.20	-.19	.03	.16
QUALITY OF SEED		-.11	.09	.28+	-.06	-.01	-.01	-.09	.40++	.12
PERCENT GERM.		.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 139 EXPERIMENT 39 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
9	JUPITER	1.00	140.25	35.50	21.85	23.20	2.75	.00
4	HARDEE LS	1.00	118.00	40.25	11.35	18.98	2.25	.00
12	RILLITO	1.00	172.75	25.00	4.00	18.15	2.50	.00
14	WILLIAMS	1.00	198.25	24.50	3.05	18.68	2.00	.00
11	KAHALA	1.00	198.25	24.25	8.70	18.85	3.00	.00
10	IMPROVED PELICAN	1.00	185.75	30.00	10.80	16.10	2.50	.00
2	UFV-1	1.00	155.25	24.00	8.10	19.43	2.25	.00
7	TUNIA	1.00	139.00	24.50	7.05	20.93	2.25	.00
16	ECUADOR 2	1.00	123.00	32.50	8.00	19.63	2.75	.00
13	ROSSIER	1.00	177.50	20.00	5.90	14.10	2.00	.00
3	SJ-2	1.00	136.50	28.50	10.85	15.25	2.50	.00
8	CARIBE	1.00	172.25	23.75	5.60	12.23	2.50	.00
15	ECUADOR 1	1.00	77.25	21.50	7.50	24.85	2.50	.00
5	ORBA	1.00	148.75	22.50	11.15	17.55	3.00	.00
1	CH-3	1.00	151.75	28.00	10.20	15.30	3.00	.00
6	IAC-2	1.00	151.75	15.75	8.35	22.98	3.25	.00
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN		1.00	152.89	26.28	8.90	18.51	2.56	.00
COEFFICIENT OF VARIATION		.00	14.68	4.22	1.28	1.19	.35	.00
5% LSD VARIETY MEANS (*****=NS)		.00	19.20%	32.11%	28.84%	12.89%	27.21%	.00%
		.00	41.81	12.02	3.66	3.40	*****	.00
C O R R E L A T I O N S								
			(+ - PROB=.05			++ - PROB=.01)		
YIELD	KG/HA	.00	.20	.54++	.29+	.21	-.11	.00
DAYS TO	FLOWER	.00	-.29+	.32+	.59++	.25	.09	.00
DAYS TO	MATURITY	.00	-.47++	.19	.54++	.40++	.28+	.00
NODULE	ABUND 1	.00	-.22	-.05	.11	.02	-.06	.00
NODULE	ABUND 2	.00	-.19	.06	.13	-.05	-.01	.00
NODULE	ACT. 1	.00	-.01	-.16	.19	.20	-.01	.00
NODULE	ACT. 2	.00	.07	-.31+	-.26+	-.19	-.09	.00
PLANT	HEIGHT	.00	-.11	.34++	.67++	.03	.40++	.00
LODGING		.00	-.01	.38++	.25+	.16	.12	.00
SHATTER		1.00	.00	.00	.00	.00	.00	.00
PLANTS	HARVEST	.00	1.00	-.15	-.12	-.30+	-.09	.00
PODS PER	PLANT	.00	-.15	1.00	.26+	.08	.07	.00
POD	HEIGHT	.00	-.12	.26+	1.00	.18	.18	.00
100 SEED	WEIGHT	.00	-.30+	.08	.18	1.00	.28+	.00
QUALITY	OF SEED	.00	-.09	.07	.18	.28+	1.00	.00
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	1.00

TABLE 140

EXPERIMENT 38

YEAR 1978

REGION - SOUTH AMERICA
 SITE - E.E. PORTOVIEJO
 LATITUDE - 1 DEG. 4 MIN. S
 COOPERATOR - INIAP
 DATE PLANTED - AUGUST 1, 1978
 SOIL TYPE - SAND 20%, SILT 30%, CLAY 50%, PH 7.5
 AMOUNT OF MOISTURE - 400 MM
 NUMBER OF IRRIGATIONS - 7 (50 MM)
 LOCAL VARIETIES - ECUADOR 1, ECUADOR 2

COUNTRY - ECUADOR
 ELEVATION - 25 M
 LONGITUDE - 80 DEG. 26 MIN. W

DATE HARVESTED - NOVEMBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
10	IMPROVED PELICAN	2072.75	36.00	107.00	4.00	4.00	.00	.00	56.25	1.50
7	TUNIA	2024.50	32.00	107.00	4.00	4.50	.00	.00	48.50	1.00
6	IAC-2	1887.25	35.00	107.00	4.00	4.25	.00	.00	52.25	1.25
3	SJ-2	1779.50	36.00	111.50	4.25	4.50	.00	.00	55.75	2.50
2	UFV-1	1746.25	36.00	107.00	4.00	3.50	.00	.00	32.25	1.00
12	RILLITO	1704.75	30.00	107.00	3.75	4.25	.00	.00	38.50	1.25
13	BOSSIER	1645.75	35.00	107.00	3.75	4.25	.00	.00	38.75	1.50
5	ORBA	1637.00	35.00	107.00	4.00	4.25	.00	.00	44.50	1.50
16	ECUADOR 2	1587.00	38.00	107.00	4.00	4.00	.00	.00	41.25	1.25
1	CH-3	1560.75	35.00	111.50	4.00	3.75	.00	.00	65.50	1.00
14	WILLIAMS	1525.75	30.00	107.00	3.75	4.25	.00	.00	33.25	1.00
9	JUPITER	1491.25	46.50	116.00	4.25	4.50	.00	.00	63.25	3.00
8	CARIBE	1366.50	34.00	118.25	3.75	4.00	.00	.00	48.75	2.00
11	KAHALA	1336.75	34.00	96.00	3.75	4.25	.00	.00	38.25	2.00
15	ECUADOR 1	1316.00	41.00	107.00	3.75	4.00	.00	.00	37.00	1.00
4	HARDEE LS	1312.25	37.50	116.00	4.00	3.75	.00	.00	56.75	1.00
GRAND MEAN		1624.63	35.69	108.70	3.94	4.13	.00	.00	46.92	1.48
STANDARD ERROR OF A VARIETY MEAN		155.26	1.89	.93	.18	.32	.00	.00	2.42	.31
COEFFICIENT OF VARIATION		19.11%	10.58%	1.71%	9.18%	15.54%	.00%	.00%	10.30%	42.40%
5% LSD VARIETY MEANS (*****=NS)		442.24	5.38	2.64	*****	*****	.00	.00	6.88	.90
C O R R E L A T I O N S										
		(+ - PROB=.05 ++ - PROB=.01)								
YIELD	KG/HA	1.00								
DAYS TO FLOWER		-.15								
DAYS TO MATURITY		1.00								
NODULE ABUND 1		.07								
NODULE ABUND 2		-.02								
NODULE ACT. 1		.00								
NODULE ACT. 2		.00								
PLANT		.31+								
LOGGING		.13								
SHATTER		.00								
PLANTS HARVEST		.33++								
PODS PER PLANT		.23								
POD HEIGHT		-.09								
100 SEED WEIGHT		.17								
QUALITY OF SEED		-.09								
PERCENT GERM.		.20								
YIELD	KG/HA									
DAYS TO FLOWER		-.15								
DAYS TO MATURITY		1.00								
NODULE ABUND 1		.07								
NODULE ABUND 2		-.02								
NODULE ACT. 1		.00								
NODULE ACT. 2		.00								
PLANT		.31+								
LOGGING		.13								
SHATTER		.00								
PLANTS HARVEST		.33++								
PODS PER PLANT		.23								
POD HEIGHT		-.09								
100 SEED WEIGHT		.17								
QUALITY OF SEED		-.09								
PERCENT GERM.		.20								

TABLE 140 EXPERIMENT 38 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
10	IMPROVED PELICAN	.00	197.50	44.25	10.75	15.40	1.50	93.00	44.0	22.0
7	TUNIA	.00	199.50	30.50	11.25	18.68	3.00	53.00	41.5	21.9
6	IAC-2	.00	200.00	38.00	11.00	17.20	3.25	82.00	40.2	23.9
3	SJ-2	.00	199.00	41.50	10.75	14.55	2.75	85.00	41.5	21.8
2	UFV-1	.00	200.00	25.00	9.50	14.93	1.75	100.00	43.7	21.4
12	RILLITO	.00	200.00	40.50	7.50	14.98	2.75	83.00	43.1	22.1
13	BOSSIER	.00	200.00	29.00	9.75	14.75	2.25	92.00	43.9	22.0
5	ORBA	.00	200.00	33.75	9.25	13.23	3.00	98.00	41.4	20.3
16	ECUADOR 2	.00	131.00	44.00	8.50	17.75	2.50	75.00	44.1	22.6
1	CH-3	.00	196.50	32.25	13.00	13.90	3.00	93.00	40.9	22.8
9	WILLIAMS	.00	199.00	22.25	7.25	17.40	2.75	85.00	42.3	23.6
14	JUPITER	.00	200.00	35.75	14.00	17.35	2.25	48.00	41.7	22.4
8	CARIBE	.00	200.00	38.00	9.50	15.40	3.50	77.00	44.9	19.1
11	KAHALA	.00	200.00	26.00	7.50	17.10	3.50	55.00	43.4	21.0
15	ECUADOR 1	.00	92.25	41.00	9.00	19.05	2.50	38.00	42.4	23.9
4	HARDEE LS	.00	184.25	40.50	14.50	12.15	1.75	87.00	40.8	24.4
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	.00	.33++	.23	-.09	.17	-.09	.20		
DAYS TO FLOWER		.00	-.33++	.14	.32++	.05	-.27+	-.33++		
DAYS TO MATURITY		.00	.06	.31+	.40++	-.25+	-.12	.10		
NODULE ABUND 1		.00	.06	.08	.02	-.00	-.14	.03		
NODULE ABUND 2		.00	.12	-.10	-.17	.17	.10	-.17		
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00		
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00		
PLANT HEIGHT		.00	.27+	.38++	.56++	-.21	-.04	.01		
LOGGING		.00	.20	.05	.11	.11	.12	-.19		
SHATTER		1.00	.00	.00	.00	.00	.00	.00		
PLANTS HARVEST		.00	1.00	-.34++	.17	-.37++	.08	.44++		
PODS PER PLANT		.00	-.34++	1.00	-.02	-.03	-.13	-.06		
POD HEIGHT		.00	.17	-.02	1.00	-.33++	-.18	-.00		
100 SEED WEIGHT		.00	-.37++	-.03	1.00	1.00	.30+	-.68++		
QUALITY OF SEED		.00	.08	-.13	-.18	.30+	1.00	-.21		
PERCENT GERM.		.00	.44++	-.06	-.00	-.68++	-.21	1.00		

TABLE 141

EXPERIMENT 9

YEAR 1978

REGION - SOUTH AMERICA
 SITE - PICHILINGUE
 LATITUDE - 1 DEG. 6 MIN. S
 COOPERATOR - EDUARDO MALDONADO
 DATE PLANTED - JUNE 14, 1978
 AMOUNT OF MOISTURE - 26 MM
 LOCAL VARIETIES - ECUADOR 1, ECUADOR 2

COUNTRY - ECUADOR
 ELEVATION - 73 M
 LONGITUDE - 79 DEG. 29 MIN. W

DATE HARVESTED - SEPTEMBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
2	UFV-1	2993.52	35.50	101.25	4.00	4.00	20.00	37.50	52.00	1.00
15	ECUADOR 1	2908.08	41.00	104.00	4.00	3.75	33.75	61.25	80.00	2.50
10	IMPROVED PELICAN	2891.41	35.75	97.75	3.75	3.75	21.25	27.50	96.50	3.00
13	BOSSIER	2829.73	35.50	100.00	4.00	3.50	38.75	73.75	70.25	1.75
14	WILLIAMS	2811.81	28.00	90.00	4.00	4.00	16.25	40.00	65.25	1.50
9	JUPITER	2750.13	47.00	111.00	4.00	3.50	20.00	66.25	93.50	3.75
1	CH-3	2681.79	34.00	111.00	4.00	4.00	20.00	40.00	127.75	3.75
11	KAHALA	2645.53	31.75	95.25	3.75	3.25	36.25	53.75	72.25	3.75
12	RILLITO	2613.02	32.50	90.00	4.00	3.50	20.00	33.75	76.50	2.00
3	SJ-2	2496.75	36.25	100.00	4.25	4.25	8.75	22.50	100.00	4.00
4	HARDEE LS	2468.41	48.25	119.00	4.00	3.50	15.00	62.50	90.75	4.25
7	TUNIA	2387.98	32.25	97.75	4.00	4.00	31.25	52.50	83.00	3.75
8	CARIBE	2230.86	35.50	104.00	4.00	3.75	31.25	60.00	113.25	4.00
6	IAC-2	2180.44	33.25	99.25	4.00	3.75	22.50	35.00	95.00	3.25
5	ORBA	2078.75	33.50	90.00	3.75	3.25	41.25	50.00	89.50	4.50
16	ECUADOR 2	2006.23	36.00	102.75	4.00	3.25	22.50	65.00	58.25	1.00
	GRAND MEAN	2560.90	36.00	100.81	3.97	3.69	24.92	48.83	85.23	2.98
	STANDARD ERROR OF A VARIETY MEAN	179.05	.40	1.22	.13	.26	4.84	10.11	5.51	.40
	COEFFICIENT OF VARIATION	13.98%	2.21%	2.42%	6.44%	14.22%	38.85%	41.41%	12.92%	26.76%
	5% LSD VARIETY MEANS (*****=NS)	510.01	1.13	3.47	*****	*****	13.79	28.80	15.68	1.14

CORRELATIONS

(+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
1.00	.08	.06	-.03	.18	-.05	-.12	-.08	-.26+
.08	1.00	.78++	.07	-.11	-.13	.27+	.15	.23
.06	.78++	1.00	.11	.02	-.21	.25+	.21	.21
-.03	.07	.11	1.00	.04	-.29+	.01	-.01	-.19
.18	-.11	.02	.04	1.00	-.24	-.62++	.07	-.11
-.05	-.13	-.21	-.29+	-.24	1.00	.43++	-.10	.06
-.12	.27+	.25+	.01	-.62++	.43++	1.00	-.13	.03
-.08	.15	.29+	-.01	.07	-.10	-.13	1.00	.60++
.26+	.23	.21	-.19	-.11	.06	.03	.60++	1.00
-.23	.23	.21	-.19	-.11	.30+	-.06	-.02	.32++
.33++	-.16	-.35++	-.08	.22	.07	-.11	.17	.21
-.21	.48++	.46++	.10	.03	-.20	-.03	.45++	.34++
.29+	.05	.22	-.09	.08	.11	.05	.34++	.19
.35++	-.17	-.12	-.03	.02	.03	.07	-.50++	-.52++
-.07	-.31+	-.21	-.16	-.23	.07	.17	-.07	-.01
.21	-.01	-.13	.06	.19	.01	-.24	.09	.14

TABLE 141

EXPERIMENT 9 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
2	UFV-1	1.00	200.50	28.00	15.50	17.83	1.75	97.00	44.8	20.7
15	ECUADOR 1	1.00	144.25	49.50	16.75	21.90	2.00	93.00	44.7	22.4
10	IMPROVED PELICAN	1.00	189.50	37.25	16.25	15.98	2.00	98.00	44.2	22.3
13	BOSSIER	1.00	206.75	29.50	18.25	18.33	2.75	87.50	45.5	19.2
14	WILLIAMS	1.00	196.50	23.00	11.25	21.38	2.50	91.75	43.2	21.6
9	JUPITER	1.00	180.00	51.00	15.25	16.75	1.75	95.00	44.9	19.3
1	CH-3	1.00	183.25	49.50	18.50	15.83	3.00	82.50	44.7	19.8
11	KAHALA	2.50	197.00	24.50	15.00	21.80	3.25	96.75	45.8	18.8
12	RILLITO	1.00	191.25	25.75	11.00	15.88	3.50	90.75	43.9	20.9
3	SJ-2	1.00	186.75	67.50	15.50	15.03	1.00	99.00	44.7	21.0
4	HARDEE LS	1.00	181.50	51.50	13.75	14.08	2.00	89.00	43.9	21.1
7	TUNIA	1.00	185.75	33.00	17.75	17.48	3.25	96.00	45.5	19.9
8	CARIBE	1.00	188.50	49.50	15.75	11.73	1.75	96.75	48.2	17.8
6	IAC-2	1.00	189.75	30.25	18.00	15.85	2.25	96.00	45.8	21.9
5	ORBA	3.00	180.00	43.75	14.50	11.68	2.00	91.50	43.2	20.3
16	ECUADOR 2	1.00	59.25	57.50	13.25	19.35	2.50	73.00	45.4	22.1
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****NS)										
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	-.23	.33++	-.21	.29+	.35++	-.07	.21		
DAYS TO FLOWER		-.22	-.16	.48++	.05	-.17	-.31+	-.01		
DAYS TO MATURITY		-.35++	-.14	.46++	.22	-.12	-.21	-.13		
NODULE ABUND 1		-.44++	-.08	.10	-.09	-.03	-.16	.06		
NODULE ABUND 2		-.16	.22	.03	.08	.02	-.23	.19		
NODULE ACT. 1		.30+	.07	-.20	.11	.03	.07	.01		
NODULE ACT. 2		-.06	-.11	-.03	.05	.07	.17	-.24		
PLANT HEIGHT		-.02	.17	.45++	.34++	-.50++	-.07	.09		
LODGING		.32++	.21	.34++	.19	-.52++	-.01	.14		
SHATTER		1.00	.07	-.05	-.10	-.11	.12	-.02		
HARVEST		.07	1.00	-.45++	.17	-.17	.00	.55++		
PLANTS PER PLANT		-.05	-.45++	1.00	.03	-.29+	-.33++	-.21		
POD HEIGHT		-.10	.17	.03	1.00	-.08	-.01	.17		
WEIGHT		-.11	-.17	-.29+	-.08	1.00	.18	.00		
100 SEED QUALITY		.12	.00	-.33++	-.01	.18	1.00	-.19		
PERCENT GERM.		-.02	.55++	-.21	.17	.00	-.19	1.00		

TABLE 142

EXPERIMENT 31

YEAR 1978

REGION - SOUTH AMERICA
 SITE - CAYENNE
 LATITUDE - 4 DEG. 54 MIN. N
 COOPERATOR - IRAT
 DATE PLANTED - MAY 5, 1978
 SOIL TYPE - SAND 49%, SILT 16.8%, CLAY 34.2%, PH 4.45
 FERTILIZER USED (KG/HA) - N 25.0, P 44.0, K 83.0
 AMOUNT OF MOISTURE - 1052 MM

COUNTRY - FRENCH GUIANA
 ELEVATION - 7 M
 LONGITUDE - 52 DEG. 18 MIN. W
 DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
15	RANSOM	3396.51	33.25	98.50	1.25	1.00	100.00	100.00	73.75	1.25
11	KAHALA	3396.51	36.00	110.25	2.00	2.00	100.00	100.00	58.63	1.25
12	RILLITO	3313.16	34.00	89.50	1.75	2.50	96.25	100.00	60.63	1.25
8	CARIBE	3167.30	41.00	115.50	1.25	1.00	98.75	100.00	69.25	1.50
7	TUNIA	3083.95	33.50	94.00	1.50	1.00	100.00	100.00	60.25	1.50
2	UFV-1	3046.44	34.00	96.75	1.25	1.50	100.00	100.00	44.53	1.00
4	HARDEE LS	3042.27	38.00	102.25	1.50	1.25	97.50	100.00	81.50	1.00
3	SJ-2	3021.44	32.75	87.50	1.00	1.75	98.75	100.00	63.75	1.50
14	CH-3	2938.09	34.75	98.25	1.50	1.00	98.75	100.00	69.75	1.00
1	WILLIAMS	2833.90	32.00	98.75	1.25	1.75	98.75	100.00	53.53	1.00
9	JUPITER	2813.06	32.00	91.75	1.25	1.00	100.00	100.00	42.63	1.50
6	IAC-2	2813.06	31.75	87.50	1.75	1.50	97.50	100.00	54.00	1.00
5	ORBA	2792.22	35.50	96.00	2.00	1.50	100.00	100.00	65.88	1.50
10	IMPROVED PELICAN	2679.70	35.50	104.75	1.75	1.00	98.75	100.00	64.75	1.50
16	COBB	2667.20	31.00	104.75	2.00	1.00	100.00	100.00	63.25	1.50
13	BOSSIER	2333.80	36.25	105.50	2.00	1.75	97.50	100.00	61.38	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		2958.66	34.45	98.84	1.56	1.41	98.91	100.00	61.71	1.27
COEFFICIENT OF VARIATION		285.46	2.50	6.79	.30	.33	1.25	.00	11.15	.28
5% LSD VARIETY MEANS (*****=NS)		19.30%	14.52%	13.74%	38.61%	47.33%	2.52%	.00%	36.12%	43.60%
		*****	*****	*****	*****	*****	*****	*****	*****	*****
C O R R E L A T I O N S										
		(+ - PROB=.05		++ - PROB=.01)						
YIELD	KG/HA	1.00								
DAYS TO FLOWER		-.13								
DAYS TO MATURITY		1.00								
NODULE ABUND 1		-.06								
NODULE ABUND 2		-.13								
NODULE ACT. 1		-.10								
NODULE ACT. 2		-.12								
PLANT HEIGHT		.00								
LOGGING		.15								
SHATTER		-.18								
HARVEST		-.16								
PLANT		.07								
PODS PER		.17								
POD		-.10								
100 SEED		.06								
QUALITY		.06								
OF SEED		.06								
PERCENT		.32+								

TABLE 142

EXPERIMENT 31 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
15	RANSOM	1.00	86.00	61.75	10.63	19.78	2.25	89.25	44.7	21.8
11	KAHALA	1.25	92.00	60.25	10.13	20.78	2.50	76.50	44.4	19.5
12	RILLITO	1.00	104.00	87.50	9.38	18.53	2.25	82.25	43.4	21.5
8	CARIBE	1.25	85.50	59.00	13.13	16.68	2.25	65.50	47.2	16.4
7	TUNIA	1.00	87.25	65.00	10.38	15.88	2.25	89.75	44.1	21.1
2	UFV-1	1.00	96.50	49.50	8.38	21.00	2.50	80.75	43.8	21.2
4	HARDEE LS	1.00	73.25	71.25	11.25	17.80	2.25	90.75	42.7	19.4
3	SJ-2	1.00	103.25	62.50	10.63	20.70	1.50	84.00	44.6	18.5
14	WILLIAMS	1.00	88.50	67.75	9.75	17.68	1.50	86.75	43.6	20.7
1	CH-3	1.00	80.50	65.25	8.88	19.40	3.00	84.50	44.1	19.2
9	JUPITER	1.00	90.00	49.25	8.00	22.70	3.00	84.00	41.9	22.6
6	IAC-2	1.00	99.75	67.25	9.50	18.95	1.25	84.00	44.2	22.1
5	ORBA	1.00	92.75	85.25	10.75	16.18	1.00	93.00	42.1	20.2
10	IMPROVED PELICAN	1.25	99.25	48.00	11.88	20.43	2.50	76.50	45.5	19.2
16	COBB	1.25	103.25	60.25	11.63	19.25	2.50	70.75	43.3	19.8
13	BOSSIER	1.00	94.75	55.50	9.63	17.68	2.50	85.25	44.7	22.6
GRAND MEAN										
		1.06	92.28	63.45	10.24	18.96	2.19	82.72		
STANDARD ERROR OF A VARIETY MEAN		.13	8.93	11.79	1.52	1.91	.46	5.88		
COEFFICIENT OF VARIATION		24.30%	19.35%	37.15%	29.60%	20.15%	42.49%	14.21%		
5% LSD VARIETY MEANS (*****=NS) *****										
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	-.16	.07	.17	-.10	.16	.06	.32+		
DAYS TO	FLOWER	.49++	-.32++	.14	.50++	-.53++	.06	-.11		
DAYS TO	MATURITY	.82++	-.16	.14	.65++	-.47++	.20	-.28+		
NODULE	ABUND 1	.07	-.05	.11	.01	-.10	-.09	-.03		
NODULE	ABUND 2	-.15	.12	.01	-.35++	.24	-.06	-.03		
NODULE	ACT. 1	-.02	.07	-.20	.07	.10	.18	.05		
NODULE	ACT. 2	.00	.00	.00	.00	.00	.00	.00		
PLANT	HEIGHT	.42++	-.18	.45++	.74++	-.62++	-.04	.11		
LODGING	SHATTER	.35++	.13	-.02	.33++	-.06	.02	-.24		
PLANTS	HARVEST	1.00	.16	.03	.68++	-.31+	.20	-.48++		
PODS PER	PLANT	.16	1.00	-.48++	-.04	.44++	.03	-.29+		
FOD	HEIGHT	.03	-.48++	1.00	.22	-.60++	-.16	.26+		
100 SEED	WEIGHT	.68++	-.04	.22	1.00	-.54++	.01	-.20		
QUALITY	OF SEED	-.31+	.44++	-.60++	-.54++	1.00	.13	-.11		
PERCENT	GERM.	.20	-.03	-.16	.01	.13	1.00	-.30+		
		-.48++	-.29+	.26+	-.20	-.11	-.30+	1.00		

TABLE 143 EXPERIMENT 158 YEAR 1978

REGION - SOUTH AMERICA
 SITE - CAACUPE
 LATITUDE - 25 DEG. 24 MIN. S
 COOPERATOR - JUSTO LOPEZ P.
 DATE PLANTED - NOVEMBER 13, 1978
 SOIL TYPE - SAND 75.6%, SILT 12.0%, CLAY 12.4%, PH 5.5
 FERTILIZER USED (KG/HA) - N 25.0, P 30.0, K 25.0
 AMOUNT OF MOISTURE - 1022.5 MM
 NUMBER OF IRRIGATIONS - 4 (23.0 MM)
 LOCAL VARIETIES - VISOJA, GALAXIA

COUNTRY - PARAGUAY
 ELEVATION - 228 M
 LONGITUDE - 57 DEG. 6 MIN. W
 DATE HARVESTED - MARCH, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
9	DAVIS	2750.55	45.00	159.00	.00	.00	.00	.00	59.50	1.50
6	VISOJA	2450.49	57.00	185.00	.00	.00	.00	.00	77.00	1.25
16	CRAWFORD	2387.98	34.00	124.00	.00	.00	.00	.00	64.75	1.75
11	CALLAND	2342.13	30.00	120.00	.00	.00	.00	.00	66.00	1.50
1	IMPROVED PELICAN	2262.95	64.00	164.00	.00	.00	.00	.00	147.00	3.00
7	JAMES	2167.10	40.00	120.00	.00	.00	.00	.00	63.75	1.75
15	GALAXIA	2148.35	45.00	161.50	.00	.00	.00	.00	55.75	1.00
2	RILLITO	2108.75	45.00	164.00	.00	.00	.00	.00	100.00	1.75
14	MITCHELL	1896.21	34.00	120.00	.00	.00	.00	.00	63.25	2.00
10	GASOY 17	1783.69	40.00	185.00	.00	.00	.00	.00	50.75	1.00
12	FRANKLIN	1777.44	30.00	120.00	.00	.00	.00	.00	55.00	1.25
13	CUTLER 71	1750.35	34.00	120.00	.00	.00	.00	.00	54.00	1.50
4	WILLIAMS	1625.32	30.00	120.00	.00	.00	.00	.00	48.75	1.75
3	BOSSIER	1196.07	53.00	185.00	.00	.00	.00	.00	82.00	1.00
5	RANSOM	875.17	40.00	185.00	.00	.00	.00	.00	43.75	1.00
8	FORREST	645.96	45.00	159.00	.00	.00	.00	.00	52.25	1.50
GRAND MEAN		1885.53	41.63	149.47	.00	.00	.00	.00	67.72	1.53
STANDARD ERROR OF A VARIETY MEAN		278.90	.00	.63	.00	.00	.00	.00	2.71	.21
COEFFICIENT OF VARIATION		29.58%	.00%	.84%	.00%	.00%	.00%	.00%	8.00%	27.21%
5% LSD VARIETY MEANS (*****=NS)		794.41	.00	1.78	.00	.00	.00	.00	7.72	.59

C O R R E L A T I O N S

	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
YIELD	1.00	.06	.06	.00	.00	.00	.00	.00	.30+
DAYS TO FLOWER	.06	1.00	.72++	.00	.00	.00	.00	.00	.20
DAYS TO MATURITY	-.17	.72++	1.00	.00	.00	.00	.00	.00	-.27+
NODULE ABUND 1	.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ABUND 2	.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE ACT. 1	.00	.00	.00	.00	.00	1.00	.00	.00	.00
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANT	.28+	.69++	.22	.00	.00	.00	.00	1.00	.56++
LOGGING	.30+	.20	-.27+	.00	.00	.00	.00	.56++	1.00
SHATTER	-.08	-.13	-.23	.00	.00	.00	.00	-.03	.02
HARVEST	.15	-.24	-.28+	.00	.00	.00	.00	-.15	.08
PLANTS	.14	.68++	.00	.00	.00	.00	.00	.46++	.02
PODS PER	.00	.00	.00	.00	.00	.00	.00	.00	.00
100 SEED	-.15	-.58++	-.06	.00	.00	.00	.00	-.67++	-.48++
QUALITY	-.68++	-.05	.41++	.00	.00	.00	.00	-.38++	-.50++
PERCENT	.00	.00	.00	.00	.00	.00	.00	.00	.00

(+ - PROB=.05 ++ - PROB=.01)

TABLE 143 EXPERIMENT 158 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
9	DAVIS	1.25	272.25	28.78	.00	24.60	2.75	.00	44.5	21.2
6	VISOJA	1.00	178.25	71.25	.00	16.93	3.25	.00	42.5	19.4
16	CRAWFORD	1.00	145.75	42.30	.00	22.25	2.75	.00	45.3	19.1
11	CALLAND	1.00	240.00	29.70	.00	23.55	3.25	.00	42.9	20.2
7	IMPROVED PELICAN	1.25	197.00	58.28	.00	13.40	1.25	.00	42.2	20.9
1	JAMES	1.00	258.75	28.70	.00	20.88	2.25	.00	44.5	21.9
15	GALAXIA	1.00	137.75	38.65	.00	23.75	2.50	.00	45.8	18.2
2	RILLITO	1.00	159.50	51.35	.00	22.85	3.75	.00	45.9	19.3
14	MITCHELL	1.00	177.00	29.78	.00	22.05	2.75	.00	42.7	20.5
10	GASOY 17	1.25	190.25	53.00	.00	23.85	4.00	.00	43.0	20.2
12	FRANKLIN	1.25	239.75	24.05	.00	21.20	3.00	.00	41.9	22.3
13	CUTLER 71	1.25	252.75	29.38	.00	22.63	2.75	.00	43.5	21.5
4	WILLIAMS	1.50	223.25	26.75	.00	22.23	2.75	.00	44.0	21.0
3	BOSSIER	1.00	191.00	54.65	.00	23.25	4.50	.00	41.7	20.6
5	RANSOM	1.00	214.00	46.20	.00	24.73	5.00	.00	44.9	22.7
8	FORREST	1.00	172.75	31.68	.00	19.90	5.00	.00	44.4	19.6
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		1.11	203.13	40.28	.00	21.75	3.22	.00		
COEFFICIENT OF VARIATION		.14	17.08	4.29	.00	.51	.35	.00		
5% LSD VARIETY MEANS (*****=NS)		25.86%	16.82%	21.32%	.00%	4.70%	21.63%	.00%		
		*****	48.65	12.23	.00	1.46	.99	.00		
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)										
YIELD KG/HA										
DAYS TO FLOWER		-.08	.15	.14	.00	-.15	-.68++	.00		
DAYS TO MATURITY		-.13	-.24	.66++	.00	-.58++	-.05	.00		
NODULE ABUND 1		-.23	-.28+	.68++	.00	-.06	.41++	.00		
NODULE ABUND 2		.00	.00	.00	.00	.00	.00	.00		
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00		
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00		
PLANT HEIGHT		-.03	-.15	.46++	.00	-.67++	-.38++	.00		
LODGING		.02	.08	.02	.00	-.48++	-.50++	.00		
SHATTER		1.00	.14	-.24	.00	.02	-.15	.00		
HARVEST		.14	1.00	-.37++	.00	-.36++	.11	.00		
PLANTS PER PLANT		-.24	-.37++	1.00	.00	1.00	.37++	.00		
POD WEIGHT		.00	.00	.00	.00	.00	.00	.00		
100 SEED WEIGHT		.02	.15	-.36++	.00	1.00	.37++	.00		
QUALITY OF SEED		-.15	-.12	.11	.00	.37++	1.00	.00		
PERCENT GERM.		.00	.00	.00	.00	.00	.00	1.00		

TABLE 144

EXPERIMENT 10

YEAR 1978

REGION - SOUTH AMERICA
 SITE - EL PORVENIR
 LATITUDE - 6 DEG. 31 MIN. S
 COOPERATOR - ING. ARMANDO CUEVA - BENAVIDES
 DATE PLANTED - APRIL 13, 1978
 SOIL TYPE - SAND 38%, SILT 18%, CLAY 44%, PH 7.5
 AMOUNT OF MOISTURE - 379 MM

COUNTRY - PERU

ELEVATION - 262 M

LONGITUDE - 76 DEG. 21 MIN. W

DATE HARVESTED - JULY, 1978

DATE HARVESTED - JULY, 1978

DATE HARVESTED - JULY, 1978

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DATE HARVESTED - JULY, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
9	JUPITER	1063.56	42.50	115.00	4.00	3.25	83.75	78.75	47.50	1.00
10	IMPROVED PLEICAN	983.25	36.75	96.75	2.50	3.00	96.25	62.50	50.50	1.00
3	SJ-2	951.12	38.50	112.75	3.50	3.50	98.75	73.75	44.75	1.00
4	HARDEE LS	878.44	45.00	121.00	3.25	3.25	86.25	71.25	32.50	1.00
2	UFV-1	837.28	37.25	111.25	3.75	3.25	83.75	67.50	24.25	1.00
13	BOSSIER	829.91	39.00	98.00	3.00	3.50	88.75	72.50	30.25	1.00
16	COBB	758.31	34.75	106.75	3.50	3.75	88.75	60.00	29.00	1.00
8	CARIBE	723.00	40.00	120.50	2.50	3.00	91.25	68.75	51.25	1.00
5	ORBA	721.87	35.75	94.00	3.25	3.50	95.00	65.00	41.75	1.00
12	RILLITO	717.72	33.50	92.50	2.75	3.25	93.75	51.25	37.00	1.00
15	RANSOM	695.84	33.00	94.50	3.25	3.50	92.50	57.50	26.00	1.00
1	CH-3	669.00	40.50	112.50	2.75	2.75	92.50	73.75	47.75	1.00
14	WILLIAMS	562.19	33.00	89.50	2.75	3.25	86.25	51.25	34.00	1.00
7	TUNIA	535.12	33.50	117.75	3.50	3.00	95.00	72.50	36.25	1.00
6	IAC-2	507.12	39.25	117.50	3.75	3.50	95.00	70.00	45.50	1.00
11	KAHALA	490.34	35.50	93.00	2.00	2.00	90.00	38.75	34.75	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		745.26	37.36	105.83	3.13	3.20	91.09	64.69	38.31	1.00
COEFFICIENT OF VARIATION		98.88	.80	1.97	.35	.38	4.52	9.01	2.49	.00
5% LSD VARIETY MEANS (*****=NS)		26.53%	4.30%	3.73%	22.31%	23.65%	9.91%	27.85%	13.01%	.00%
		281.64	2.29	5.62	.99	*****	*****	*****	7.10	.00

C O R R E L A T I O N S

(+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
1.00	.27+	.09	.28+	.22	.02	.23	.23	.00
.27+	1.00	.59++	.15	-.06	-.07	.26+	.29+	.00
.09	.59++	1.00	.28+	.06	-.12	.33++	.26+	.00
.28+	.15	.28+	1.00	.39++	.10	.30+	-.18	.00
.22	.06	.06	.39++	1.00	.01	.25	-.17	.00
.02	-.07	-.12	.10	.01	1.00	.11	.27+	.00
.23	.26+	.33++	.30+	.25	.11	1.00	.20	.00
.23	.29+	.26+	-.18	-.17	.27+	.20	1.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	1.00
-.12	-.14	-.12	-.11	-.12	.16	-.15	-.10	.00
.33++	-.34++	-.47++	-.16	-.07	.13	-.11	.10	.00
.01	.55++	.62++	.13	-.01	.05	.28+	.25	.00
.21	.46++	.42++	.01	-.15	.14	.23	.63++	.00
-.04	.37++	.58++	.23	-.07	-.03	.20	-.03	.00
-.05	.13	.38++	.26+	.02	-.03	.26+	-.14	.00
-.05	-.03	-.17	-.17	-.11	.12	-.01	.32++	.00

TABLE 144 EXPERIMENT 10 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
9	JUPITER	1.00	111.25	42.75	8.75	24.35	3.75	20.75	44.7	21.6
10	IMPROVED PLEICAN	1.00	145.25	46.75	7.25	15.43	3.25	18.25	43.9	19.9
3	SJ-2	2.00	112.00	52.50	7.58	16.33	3.75	48.50	45.0	18.2
4	HARDEE LS	1.25	73.00	76.50	6.15	21.78	4.50	5.50	42.9	21.4
2	UFV-1	2.00	118.25	39.50	5.88	18.85	3.75	23.25	45.5	19.3
13	BOSSIER	1.00	125.50	35.00	5.75	16.05	4.25	6.50	43.3	21.2
14	COBB	2.50	106.25	36.25	4.63	17.83	4.75	8.50	43.1	20.6
8	CARIBE	2.00	154.00	51.00	7.80	18.28	4.50	32.25	45.2	17.2
5	ORBA	3.00	198.50	31.25	7.00	11.53	3.00	77.50	42.9	19.9
12	RILLITO	1.00	116.75	38.25	4.50	15.40	3.50	9.25	40.3	16.0
15	RANSON	1.75	174.00	30.25	4.38	16.68	4.25	4.25	41.1	19.8
1	CH-3	2.00	59.25	52.00	7.20	18.20	3.50	27.50	42.2	19.7
14	WILLIAMS	1.00	161.25	26.00	5.00	16.35	2.50	27.25	43.3	18.4
7	TUNIA	1.25	79.75	41.75	6.78	21.58	4.75	6.50	43.9	18.8
6	IAC-2	1.00	56.50	56.50	7.65	19.70	3.75	28.00	44.8	20.8
11	KAHALA	3.00	110.00	35.00	6.88	19.60	3.75	60.00		
	GRAND MEAN	1.67	118.84	43.20	6.45	17.99	3.84	25.23		
	STANDARD ERROR OF A VARIETY MEAN	.17	20.82	4.71	.64	1.16	.37	5.70		
	COEFFICIENT OF VARIATION	20.34%	35.04%	21.82%	19.78%	12.91%	19.27%	45.16%		
	5% LSD VARIETY MEANS (*****=NS)	.48	59.32	13.43	1.82	3.31	1.05	16.23		
C O R R E L A T I O N S										
			(+ - PROB=.05	++ - PROB=.01)						
YIELD	KG/HA	-.12	.33++	.01	.21	-.04	-.05	-.05		
DAYS TO	FLOWER	-.14	-.34++	.55++	.46++	.37++	.13	-.03		
DAYS TO	MATURITY	-.12	-.47++	.62++	.42++	.58++	.38++	-.17		
NODULE	ABUND 1	-.11	-.16	.13	.01	.23	.26+	-.17		
NODULE	ABUND 2	-.12	-.07	-.01	-.15	-.07	.02	-.11		
NODULE	ACT. 1	-.16	.13	-.05	.14	-.30+	-.03	.12		
NODULE	ACT. 2	-.15	-.11	.28+	.23	.20	.26+	-.01		
PLANT	HEIGHT	-.10	.10	.25	.63++	-.03	-.14	.32++		
LODGING	HEIGHT	.00	.00	.00	.00	.00	.00	.00		
SHATTER		1.00	.19	-.17	-.02	-.23	-.05	.54++		
PLANTS	HARVEST	.19	1.00	-.54++	.05	-.48++	-.15	.21		
PODS PER	PLANT	-.17	-.54++	1.00	.20	.35++	.24	-.11		
POD	HEIGHT	-.02	.05	.20	1.00	.13	-.02	.31+		
100 SEED	WEIGHT	-.23	-.48++	.35++	.13	1.00	.33++	-.31+		
QUALITY	OF SEED	-.05	-.15	.24	-.02	.33++	1.00	-.37++		
PERCENT	GERM.	.54++	.21	-.11	.31+	-.31+	-.37++	1.00		

TABLE 145 EXPERIMENT 70 YEAR 1978

REGION - SOUTH AMERICA
 SITE - EL PORVENIR
 LATITUDE - 6 DEG. 31 MIN. S
 COOPERATORS - D. MALDONADO, L. LOPEZ
 DATE PLANTED - MARCH 1, 1979
 SOIL TYPE - SAND 43%, SILT 21%, CLAY 36%, PH 7
 LOCAL VARIETIES - TULUMAYO, NACIONAL

COUNTRY - PERU
 ELEVATION - 262 M
 LONGITUDE - 76 DEG. 21 MIN. W
 DATE HARVESTED - JUNE, 1979

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
9	IMPROVED PELICAN	2303.79	31.00	94.75	3.00	2.00	90.00	90.00	83.75	1.00
10	RILLITO	2206.27	25.75	81.50	3.25	2.25	77.50	95.00	62.50	1.00
15	DAVIS	2067.08	27.50	82.00	3.75	2.75	91.25	96.25	32.75	1.00
12	WILLIAMS	1997.07	23.00	78.50	3.50	1.50	83.75	82.50	57.50	1.25
2	SJ-2	1979.15	32.25	92.00	4.25	2.25	81.25	96.25	71.25	1.75
11	ROSSIER	1961.64	35.00	84.00	3.00	2.50	91.25	85.00	54.00	1.00
4	ORBA	1852.87	31.75	85.75	4.00	1.75	77.50	98.75	67.25	2.25
6	TUNIA	1848.70	28.00	92.50	3.50	2.25	72.50	91.25	66.50	1.50
5	IAC-2	1573.65	31.50	99.50	4.00	3.00	78.75	72.50	86.50	1.75
16	GASOY 17	1521.97	23.00	81.75	3.50	3.00	82.50	88.75	29.25	1.00
3	HARDEE LS	1491.13	42.00	97.00	4.00	3.25	96.25	76.25	83.00	1.25
1	UFV-1	1423.20	31.00	95.50	3.75	3.00	80.00	93.75	28.00	1.00
8	JUPITER	1393.20	29.75	97.25	3.75	3.00	87.50	96.25	75.50	1.00
7	CARIBE	685.55	32.00	118.50	4.00	1.75	87.50	95.00	100.50	2.25
13	TULUMAYO	286.72	50.00	111.50	3.50	3.50	82.50	72.50	109.50	2.00
14	NACIONAL	269.64	50.00	117.25	3.50	3.25	83.75	80.00	94.50	1.25
GRAND MEAN		1553.85	32.72	94.33	3.64	2.56	83.98	88.13	68.89	1.39
STANDARD ERROR OF A VARIETY MEAN		204.63	.27	3.59	.34	.49	7.21	7.06	2.61	.24
COEFFICIENT OF VARIATION		26.34%	1.64%	7.62%	18.74%	38.20%	17.17%	16.02%	7.57%	34.45%
5% LSD VARIETY MEANS (*****=NS)		582.87	.76	10.23	*****	*****	*****	*****	7.43	.68

CORRELATIONS

(+ - PROB=.05 ++ - PROB=.01)

YIELD KG/HA	1.00	-.61++	-.63++	-.02	-.15	-.03	.08	-.40++	-.14
DAYS TO FLOWER	-.61++	1.00	.64++	.01	.28+	.09	-.32+	.63++	.20
DAYS TO MATURITY	-.63++	.64++	1.00	.16	.29+	.02	-.12	.66++	.29+
NODULE ABUND 1	-.02	.01	.16	1.00	.29+	-.14	.06	.12	.10
NODULE ABUND 2	-.15	.28+	.16	.29+	1.00	-.16	-.35++	.11	.02
NODULE ACT. 1	-.03	.09	.02	-.14	.16	1.00	-.11	-.00	-.25+
NODULE ACT. 2	.08	-.32+	.12	.06	-.35++	.11	1.00	-.27+	-.20
PLANT HEIGHT	-.40++	.63++	.66++	.10	.11	-.00	-.27+	1.00	.47++
LODGING	-.14	.20	.29+	.10	.02	-.25+	-.20	.47++	1.00
SHATTER	-.44++	.39++	.56++	.01	.11	.06	-.03	.41++	.23
HARVEST	.46++	-.49++	-.48++	-.13	-.13	.16	-.04	-.20	-.12
PODS PER PLANT	.06	.06	.18	.37++	.07	.16	.10	.19	.24
POD HEIGHT	-.30+	.50++	.38++	.16	.12	.16	-.14	.67++	.17
100 SEED WEIGHT	-.17	.24	.18	.07	.26+	-.10	-.25+	.09	.03
QUALITY OF SEED	-.74++	.69++	.74++	.05	.24	.06	-.20	.65++	.18
PERCENT GERM.	.46++	-.35++	-.30+	.12	-.14	-.08	.18	-.19	.02

TABLE 145 EXPERIMENT 70 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.
9	IMPROVED PELICAN	1.00	245.25	31.00	12.00	14.50	2.50	74.75
10	RILLITO	1.00	192.00	36.25	7.00	15.00	2.50	60.75
15	DAVIS	1.00	251.25	23.00	7.00	16.75	2.00	35.75
12	WILLIAMS	1.00	266.25	20.00	9.25	19.25	2.25	36.75
2	SJ-2	1.00	130.25	43.50	11.50	14.25	2.50	84.75
11	ROSSIER	1.00	204.75	25.25	13.25	14.00	2.50	44.75
4	ORBA	1.25	191.75	32.00	11.00	13.50	2.25	87.75
6	TUNIA	1.00	200.50	27.25	10.50	15.00	3.00	51.25
5	IAC-2	1.25	178.25	32.50	14.25	16.75	4.00	46.75
16	GASOY 17	1.00	238.50	16.50	7.25	17.00	2.00	49.25
3	HARDEE LS	1.25	239.00	34.25	16.25	13.75	4.50	15.75
1	UFV-1	1.00	78.25	41.50	4.25	18.75	3.00	61.25
8	JUPITER	1.00	190.50	32.25	11.75	15.50	3.50	78.50
7	CARIBE	2.00	181.75	37.25	13.00	11.25	4.50	16.75
13	TULUMAYO	1.00	118.50	26.25	13.00	24.00	4.75	20.25
14	NACIONAL	2.25	102.25	25.25	12.75	20.25	4.75	26.50
GRAND MEAN								
STANDARD ERROR OF A VARIETY MEAN								
COEFFICIENT OF VARIATION								
5% LSD VARIETY MEANS (*****=NS)								
C O R R E L A T I O N S								
YIELD KG/HA								
DAYS TO FLOWER								
DAYS TO MATURITY								
NODULE ABUND 1								
NODULE ABUND 2								
NODULE ACT. 1								
NODULE ACT. 2								
PLANT								
LODGING								
SHATTER								
PLANTS HARVEST								
PODS PER PLANT								
POD HEIGHT								
100 SEED WEIGHT								
QUALITY OF SEED								
PERCENT GERM.								

TABLE 146 EXPERIMENT 215 YEAR 1978

REGION - SOUTH AMERICA
 SITE - HUANCAYO
 LATITUDE - 11 DEG. 54 MIN. S
 COOPERATOR - CARLOS ALBERTO LOAYZA
 DATE PLANTED - JULY 6, 1978
 SUBSTITUTE VARIETIES - JUPITER, IMPROVED PELICAN
 LOCAL VARIETY - NACIONAL

COUNTRY - PERU
 ELEVATION - 650 M
 LONGITUDE - 75 DEG. 15 MIN. E
 DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
2	CALLAND	2030.82	.00	85.25	.00	.00	.00	.00	21.30	.00
4	CUTLER 71	1912.05	.00	90.00	.00	.00	.00	.00	20.65	.00
3	FRANKLIN	1636.16	.00	86.75	.00	.00	.00	.00	19.40	.00
15	IMPROVED PELICAN	1628.24	.00	89.50	.00	.00	.00	.00	32.25	.00
6	JUPITER	1601.57	.00	108.00	.00	.00	.00	.00	37.20	.00
12	COLUMBUS	1447.79	.00	91.25	.00	.00	.00	.00	20.30	.00
9	HARCOR	1314.85	.00	88.50	.00	.00	.00	.00	20.60	.00
7	NACIONAL	1277.76	.00	130.00	.00	.00	.00	.00	56.40	.00
10	HODGSON	1191.49	.00	87.50	.00	.00	.00	.00	16.70	.00
11	ELF	1156.06	.00	83.25	.00	.00	.00	.00	13.95	.00
14	CORSOY	1075.63	.00	90.75	.00	.00	.00	.00	17.90	.00
5	MITCHELL	1033.96	.00	88.75	.00	.00	.00	.00	22.20	.00
13	UNION	1031.04	.00	87.75	.00	.00	.00	.00	21.75	.00
1	WILLIAMS	978.53	.00	86.50	.00	.00	.00	.00	20.95	.00
16	CRAWFORD	768.49	.00	89.00	.00	.00	.00	.00	22.75	.00
8	STEELE	737.65	.00	79.25	.00	.00	.00	.00	20.25	.00
GRAND MEAN		1301.38	.00	91.38	.00	.00	.00	.00	24.03	.00
STANDARD ERROR OF A VARIETY MEAN		327.46	.00	1.16	.00	.00	.00	.00	1.64	.00
COEFFICIENT OF VARIATION		50.33%	.00%	2.54%	.00%	.00%	.00%	.00%	13.68%	.00%
5% LSD VARIETY MEANS (*****=NS)		*****	.00	3.31	.00	.00	.00	.00	4.68	.00
CORRELATIONS										
YIELD			KG/HA			(+ - PROB=.05 ++ - PROB=.01)				
DAYS TO FLOWER	1.00	.00	.08	.00	.00	.00	.00	.00	.09	.00
DAYS TO MATURITY	.00	1.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 1	.08	.00	1.00	.00	.00	.00	.00	.00	.89++	.00
NODULE ABUND 2	.00	.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ACT. 1	.00	.00	.00	.00	.00	.00	1.00	.00	.00	.00
NODULE ACT. 2	.00	.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANT HEIGHT	.09	.00	.89++	.00	.00	.00	.00	.00	1.00	.00
LODGING	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SHATTER	.22	.00	.00	.00	.00	.00	.00	.00	.00	.00
HARVEST	.24	.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANTS PER	.68++	.00	.20	.00	.00	.00	.00	.00	.35++	.00
PODS PER	.04	.00	.38++	.00	.00	.00	.00	.00	.46++	.00
100 SEED	.14	.00	.87++	.00	.00	.00	.00	.00	.33++	.00
WEIGHT	.08	.00	.46++	.00	.00	.00	.00	.00	.87++	.00
QUALITY	.08	.00	.25+	.00	.00	.00	.00	.00	.25+	.00
PERCENT	.18	.00	.20	.00	.00	.00	.00	.00	.02	.00
GERM.									.16	.00

TABLE 146 EXPERIMENT 215 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
2	CALLAND	4.75	220.50	15.40	3.98	16.78	3.75	5.25	44.9	20.9
4	CUTLER 71	4.00	178.50	19.60	3.90	16.78	4.00	80.75	45.5	20.6
3	FRANKLIN	5.00	176.25	18.25	3.08	15.00	4.00	.00	44.4	20.8
15	IMPROVED PELICAN	2.75	131.50	30.75	4.25	12.03	2.25	4.00	46.6	22.8
6	JUPITER	2.00	130.75	28.40	7.05	13.25	2.00	20.00	46.8	19.0
12	COLUMBUS	3.75	145.50	18.65	3.18	16.50	3.50	69.50	46.3	20.8
9	HARCOR	.75	188.50	12.50	3.20	17.75	4.25	.00	44.9	18.6
7	NACIONAL	1.00	97.50	17.65	14.88	21.83	5.00	1.25	48.7	18.8
10	HODGSON	1.50	170.00	14.20	3.15	16.28	4.25	1.25	43.7	22.2
11	ELF	3.50	189.25	10.85	3.05	15.78	3.25	1.00	45.0	22.5
14	CORSOY	1.50	176.00	9.50	2.80	19.53	5.00	1.00	45.6	21.0
5	MITCHELL	4.25	105.50	19.35	3.93	16.03	3.25	1.00	43.9	20.3
13	UNION	2.75	199.75	9.55	3.78	16.00	3.00	86.25	45.6	21.6
1	WILLIAMS	3.00	192.25	9.35	3.70	16.55	3.00	40.00	45.9	21.4
16	CRAWFORD	2.50	80.25	19.15	2.98	16.10	2.00	97.25	45.3	20.5
8	STEELE	3.50	130.75	12.45	3.68	13.25	2.75	73.25	44.1	21.6
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	.22	.24	.68++	.04	.14	.08	-.18		
DAYS TO FLOWER		.00	.00	.00	.00	.00	.00	.00		
DAYS TO MATURITY		-.45++	-.38++	.20	.87++	.46++	.25+	-.20		
NODULE AROUND 1		.00	.00	.00	.00	.00	.00	.00		
NODULE AROUND 2		.00	.00	.00	.00	.00	.00	.00		
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00		
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00		
PLANT		-.35++	-.46++	.33++	.87++	.25+	.02	-.16		
LODGING		.00	.00	.00	.00	.00	.00	.00		
SHATTER		1.00	.18	.11	-.31+	-.29+	-.19	.16		
PLANTS HARVEST		.18	1.00	-.38++	-.37++	-.01	.13	-.11		
PODS PER PLANT		.11	-.38++	1.00	.19	-.21	-.26+	-.11		
POD HEIGHT		-.31+	-.37++	.19	1.00	.38++	.21	-.19		
100 SEED WEIGHT		-.29+	-.01	-.21	.38++	1.00	.63++	-.13		
QUALITY OF SEED		-.19	.13	-.26+	.21	.63++	1.00	-.34++		
PERCENT GERM.		.16	-.11	-.11	-.19	-.13	-.34++	1.00		

TABLE 147 EXPERIMENT 40 YEAR 1978

REGION - SOUTH AMERICA COUNTRY - PERU
 SITE - HUARANGOPAMPA - BAGUA ELEVATION - 500 M
 LATITUDE - 5 DEG. 40 MIN. S LONGITUDE - 78 DEG. 36 MIN. E
 COOPERATOR - ING. UBALDO CESAR ARCAYA MACEDA
 DATE PLANTED - SEPTEMBER 14, 1978 DATE HARVESTED - DECEMBER, 1978
 SOIL TYPE - SAND 22.1%, SILT 51.0%, CLAY 26.9%, PH 7.8
 AMOUNT OF MOISTURE - 182 MM
 NUMBER OF IRRIGATIONS - 8 (182 MM)
 LOCAL VARIETY - NACIONAL
 SUBSTITUTE VARIETY - IMPROVED PELICAN-PERU

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
13	HARDEE	2933.92	40.75	125.75	2.50	2.50	90.00	2.50	36.25	.00
7	JUPITER	2800.14	37.75	127.75	3.00	2.75	90.00	72.50	44.00	.00
12	TUNIA	2634.69	30.25	116.50	3.25	2.00	95.00	87.50	28.75	.00
2	CARIBE	2463.83	33.00	140.00	3.75	4.25	90.00	75.00	68.00	.00
16	BOSSIER	2457.57	30.00	111.00	3.00	3.00	95.00	90.00	29.50	.00
1	NACIONAL	2358.80	40.50	117.25	2.50	3.00	100.00	65.00	57.25	.00
4	CH-3	2344.64	33.00	112.00	3.75	3.50	65.00	85.00	46.50	.00
5	SJ-2	2013.32	35.25	117.75	3.25	2.50	72.50	65.00	47.50	.00
9	IAC-2	1857.04	35.25	119.00	2.25	2.00	92.50	90.00	41.75	.00
3	UFV-1	1856.62	33.00	119.00	3.50	2.75	97.50	85.00	22.50	.00
6	ORBA	1752.85	32.50	104.00	1.75	2.25	65.00	67.50	42.75	.00
10	WILLIAMS	1471.54	26.00	96.00	2.25	1.75	80.00	80.00	25.25	.00
8	RILLITO	1429.45	27.75	111.00	3.00	2.00	57.50	47.50	29.25	.00
14	IMPROVED PELICAN - PERU	1427.79	33.00	111.50	4.00	3.50	97.50	97.50	44.25	.00
15	IMPROVED PELICAN	1344.85	33.00	111.50	4.00	2.50	97.50	82.50	33.00	.00
11	KAHALA	1314.43	30.00	105.25	2.75	2.75	77.50	87.50	26.25	.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		2028.84	33.19	115.33	3.03	2.64	85.16	73.75	38.92	.00
COEFFICIENT OF VARIATION		413.26	.30	.53	.33	.56	8.35	9.38	4.12	.00
5% LSD VARIETY MEANS (*****=NS)		40.74%	1.79%	.91%	21.89%	42.56%	19.62%	25.45%	21.17%	.00%
		*****	.85	1.50	.95	*****	23.79	26.73	11.73	.00

(+ - PROB=.05 ++ - PROB=.01)

CORRELATIONS

YIELD	1.00	.34++	.35++	.01	-.04	.12	-.07	.41++	.00
DAYS TO FLOWER	.34++	1.00	.58++	-.03	.05	.26+	-.34++	.46++	.00
DAYS TO MATURITY	.35++	.58++	1.00	.20	.26+	.24	-.22	.51++	.00
NODULE ABUND 1	.01	-.03	.20	1.00	.39++	-.00	.15	.03	.00
NODULE ABUND 2	-.04	.05	.26+	.39++	1.00	-.01	.07	.19	.00
NODULE ACT. 1	.12	.26+	.24	-.00	-.01	1.00	.15	.08	.00
NODULE ACT. 2	-.07	-.34++	-.22	.15	.07	.15	1.00	-.06	.00
NODULE PLANT HEIGHT	.41++	.46++	.51++	.03	.19	.08	-.06	1.00	.00
LODGING	.00	.00	.00	.00	.00	.00	.00	.00	1.00
SHATTER	.00	.00	.00	.00	.00	.00	.00	.00	.00
HARVEST	.25+	-.35++	-.25+	-.08	-.10	-.18	.09	-.11	.00
PLANT	.00	.00	.00	.00	.00	.00	.00	.00	.00
PODS PER	.00	.00	.00	.00	.00	.00	.00	.00	.00
POD	.00	.00	.00	.00	.00	.00	.00	.00	.00
HEIGHT	.00	.00	.00	.00	.00	.00	.00	.00	.00
100 SEED	.00	.00	.00	.00	.00	.00	.00	.00	.00
WEIGHT	.00	.00	.00	.00	.00	.00	.00	.00	.00
QUALITY	-.11	-.07	-.32++	-.09	.05	-.45++	.05	.07	.00
OF SEED	-.04	-.20	.05	.22	.10	-.16	-.14	-.10	.00
GERM.									.00

TABLE 147 EXPERIMENT 40 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
13	HARDEE	.00	147.00	.00	.00	.00	2.00	97.00	39.5	24.5
7	JUPITER	.00	197.00	.00	.00	.00	2.00	95.75	37.3	26.2
12	TUNIA	.00	192.00	.00	.00	.00	2.00	96.50	41.8	21.5
2	CARIBE	.00	156.00	.00	.00	.00	2.00	97.25	44.3	21.0
16	BOSSIER	.00	200.50	.00	.00	.00	2.00	96.00	41.7	23.5
1	NACIONAL	.00	123.75	.00	.00	.00	2.00	95.75	43.5	19.9
4	CH-3	.00	167.00	.00	.00	.00	3.00	96.75	42.6	21.5
5	SJ-2	.00	154.00	.00	.00	.00	3.00	97.50	40.8	23.1
9	IAC-2	.00	167.50	.00	.00	.00	2.00	96.00	41.5	22.8
3	UFV-1	.00	150.25	.00	.00	.00	2.00	97.00	40.9	22.5
6	ORBA	.00	184.25	.00	.00	.00	3.00	96.00	38.4	22.7
10	WILLIAMS	.00	217.75	.00	.00	.00	2.00	97.00	42.8	23.2
8	RILLITO	.00	159.50	.00	.00	.00	2.00	97.50	42.0	23.3
14	IMPROVED PELICAN - PERU	.00	87.75	.00	.00	.00	2.00	96.50	40.5	24.2
15	IMPROVED PELICAN	.00	215.25	.00	.00	.00	2.00	96.75	42.1	23.2
11	KAHALA	.00	201.00	.00	.00	.00	3.00	96.50	41.9	22.9
	GRAND MEAN	.00	170.03	.00	.00	.00	2.25	96.61		
	STANDARD ERROR OF A VARIETY MEAN	.00	16.23	.00	.00	.00	.00	.34		
	COEFFICIENT OF VARIATION	.00%	19.10%	.00%	.00%	.00%	.00%	.70%		
	5% LSD VARIETY MEANS (*****=NS)	.00	46.24	.00	.00	.00	.00	.97		
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	.00	.25+	.00	.00	.00	.11	-.04		
DAYS TO	FLOWER	.00	-.35++	.00	.00	.00	-.07	-.20		
DAYS TO	MATURITY	.00	-.25+	.00	.00	.00	-.32++	.05		
NODULE	ABUND 1	.00	-.08	.00	.00	.00	-.09	.22		
NODULE	ABUND 2	.00	-.10	.00	.00	.00	.05	.10		
NODULE	ACT. 1	.00	-.18	.00	.00	.00	-.45++	-.16		
NODULE	ACT. 2	.00	.09	.00	.00	.00	.05	-.14		
PLANT	HEIGHT	.00	-.11	.00	.00	.00	.07	-.10		
LODGING		.00	.00	.00	.00	.00	.00	.00		
SHATTER		1.00	.00	.00	.00	.00	.00	.00		
PLANTS	HARVEST	.00	1.00	.00	.00	.00	.08	.02		
PODS PER	PLANT	.00	.00	1.00	.00	.00	.00	.00		
POD	HEIGHT	.00	.00	.00	1.00	.00	.00	.00		
100 SEED	WEIGHT	.00	.00	.00	.00	1.00	.00	.00		
QUALITY	OF SEED	.00	.08	.00	.00	.00	1.00	.06		
PERCENT	GERM.	.00	.02	.00	.00	.00	.06	1.00		

TABLE 148 EXPERIMENT 46 YEAR 1978

REGION - SOUTH AMERICA COUNTRY - PERU
 SITE - LA MOLINA ELEVATION - 251 M
 LATITUDE - 12 DEG. 05 MIN. S LONGITUDE - 76 DEG. 57 MIN. W
 COOPERATOR - JOSE BRUNO
 DATE PLANTED - DECEMBER 6, 1978 DATE HARVESTED - APRIL, 1979
 SOIL TYPE - SAND 50.8%, SILT 25.0%, CLAY 24.7%, PH 8.0
 AMOUNT OF MOISTURE - 390 MM
 NUMBER OF IRRIGATIONS - 5 (390 MM)
 LOCAL VARIETIES - NACIONAL, MANDARIN S4-ICA

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
14	MANDARIN S4-ICA	4246.27	52.50	133.00	3.75	2.50	100.00	100.00	93.75	3.75
6	TUNIA	3962.88	50.50	130.00	4.00	4.00	100.00	100.00	69.25	1.75
15	DAVIS	3901.61	48.75	128.25	3.50	3.00	100.00	98.75	56.00	1.00
11	BOSSIER	3479.03	48.75	127.25	4.00	4.00	100.00	100.00	52.00	1.25
9	IMPROVED PELICAN	3220.64	58.25	130.00	4.00	3.50	96.25	93.75	95.75	2.25
7	CARIBE	2981.43	57.25	140.00	4.00	2.00	98.75	98.75	84.50	3.00
13	NACIONAL	2963.93	66.50	139.50	4.00	2.75	98.75	100.00	90.00	2.25
5	IAC-2	2825.98	57.50	134.00	3.75	2.75	98.75	100.00	84.00	1.50
4	ORBA	2783.89	54.50	129.75	3.50	3.50	96.25	100.00	82.25	3.25
16	GASOY 17	2552.18	40.00	123.50	4.00	4.00	98.75	100.00	36.00	1.00
3	HARDEE LS	2474.24	63.75	138.00	4.00	1.50	95.00	100.00	74.00	1.50
1	UFV-1	2397.15	59.25	136.00	4.00	4.00	100.00	100.00	50.00	1.00
10	RILLITO	2380.89	41.25	110.00	4.25	4.00	98.75	98.75	41.75	1.00
2	SJ-2	2196.27	54.25	133.00	4.25	3.75	98.75	100.00	76.00	1.50
8	JUPITER	1798.69	69.75	150.50	4.00	3.50	95.00	96.25	78.25	1.50
12	WILLIAMS	1634.49	32.00	100.00	4.00	4.00	100.00	98.75	28.75	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN		2862.47	53.42	130.17	3.94	3.30	98.44	99.06	68.27	1.78
COEFFICIENT OF VARIATION		357.35	1.75	1.00	.26	.49	2.00	1.82	4.79	.36
5% LSD VARIETY MEANS (*****=NS)		1017.89	6.56%	1.53%	13.45%	29.68%	4.07%	3.68%	14.04%	40.08%
			4.99	2.84	*****	1.39	*****	*****	13.65	1.02
C O R R E L A T I O N S (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.03	.09	-.27+	-.18	.20	.02	.38++	.38++
DAYS TO FLOWER		.03	1.00	.87++	-.04	-.29+	-.30+	-.08	.59++	.18
DAYS TO MATURITY		.09	.87++	1.00	-.06	-.30+	-.21	-.02	.57++	.25+
NODULE ABUND 1		-.27+	-.04	1.00	1.00	.37++	-.01	.01	-.08	-.22
NODULE ABUND 2		-.18	-.29+	-.30+	.37++	1.00	.21	.15	-.38++	-.30+
NODULE ACT. 1		.20	-.21	-.01	-.01	.21	1.00	.18	-.06	.10
NODULE ACT. 2		.02	-.08	-.02	.01	.15	.18	1.00	-.26+	-.15
PLANT		.38++	.59++	.57++	-.08	-.38++	-.06	-.26+	1.00	.71++
LODGING		.38++	.18	.25+	-.22	-.30+	.10	-.15	.71++	1.00
SHATTER		-.28+	-.43++	-.09	.18	.30+	.25+	.07	.18	.04
HARVEST		.13	-.53++	-.50++	-.05	.29+	.18	-.08	-.24	-.04
PLANTS		.44++	.47++	.54++	-.16	-.45++	-.06	.04	.61++	.47++
PODS PER PLANT		.38++	.57++	.58++	-.12	-.24	-.04	.09	.79++	.55++
100 SEED WEIGHT		.38++	-.36++	-.31+	-.13	.14	.22	.01	-.27+	-.13
QUALITY OF SEED		-.30+	-.44++	-.43++	.09	-.01	-.07	.01	-.42++	-.29+
PERCENT		.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 148 EXPERIMENT 46 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
14	MANDARIN S4-ICA	1.00	165.50	54.75	16.85	17.75	1.50	.00	39.9	21.8
6	TUNIA	1.00	223.25	33.50	12.93	19.75	2.00	.00	39.6	22.4
15	DAVIS	1.00	227.75	33.50	10.48	19.98	2.00	.00	40.6	21.6
11	BOSSIER	1.00	205.00	34.75	12.88	17.63	2.00	.00	39.0	22.5
9	IMPROVED PELICAN	1.50	239.75	38.50	14.05	14.05	1.50	.00	40.2	21.2
7	CARIBE	1.00	207.25	38.50	13.55	11.38	2.00	.00	38.8	19.6
13	NACIONAL	1.00	169.75	25.75	17.90	19.55	1.25	.00	39.8	19.4
5	IAC-2	1.00	184.75	48.25	14.55	13.30	1.75	.00	38.4	22.0
4	ORBA	3.00	188.75	37.00	16.45	13.38	1.75	.00	36.4	20.0
16	GASOY 17	1.00	249.25	22.75	7.83	18.18	3.00	.00	37.7	22.0
3	HARDEE LS	1.25	149.25	48.25	12.05	12.30	2.50	.00	39.5	19.8
1	UFV-1	1.00	145.00	31.00	9.70	14.83	1.50	.00	39.9	21.8
10	RILLITO	2.00	202.25	17.25	7.15	15.85	3.50	.00	39.8	22.4
2	SJ-2	1.50	177.50	38.00	13.63	11.73	2.00	.00	35.9	21.9
8	JUPITER	1.00	167.25	32.75	13.30	14.43	1.75	.00	39.7	21.0
12	WILLIAMS	2.00	262.50	9.00	5.88	17.55	2.25	.00	38.8	22.1
	GRAND MEAN	1.33	197.80	33.97	12.45	15.73	2.02	.00		
	STANDARD ERROR OF A VARIETY MEAN	.11	14.14	3.84	1.00	.50	.26	.00		
	COEFFICIENT OF VARIATION	17.13%	14.29%	22.58%	16.10%	6.36%	26.10%	.00%		
	5% LSD VARIETY MEANS (*****=NS)	.32	40.27	10.92	2.86	1.42	.75	.00		
C O R R E L A T I O N S										
			(+ - PROB=.05	++ - PROB=.01)						
YIELD	KG/HA	-.28+	.13	.44++	.38++	.38++	-.30+	.00		
DAYS TO	FLOWER	-.26+	-.53++	.47++	.57++	-.36++	-.44++	.00		
DAYS TO	MATURITY	-.43++	-.50++	.54++	.58++	-.31+	-.43++	.00		
NODULE	ABUND 1	-.09	-.05	-.16	-.12	-.13	.09	.00		
NODULE	ABUND 2	.18	.29+	-.45++	-.24	.14	-.01	.00		
NODULE	ACT. 1	-.25+	.18	-.06	-.04	.22	-.07	.00		
NODULE	ACT. 2	.07	-.08	.04	.09	.01	.01	.00		
PLANT	HEIGHT	-.18	-.24	.61++	.79++	-.27+	-.42++	.00		
LODGING		.04	-.04	.47++	.55++	-.13	-.29+	.00		
SHATTER		1.00	.15	-.28+	.07	-.25	.13	.00		
HARVEST		.15	1.00	-.36++	-.29+	.27+	.11	.00		
PODS PER	PLANT	-.28+	-.36++	1.00	.54++	-.30+	-.27+	.00		
POD	HEIGHT	-.07	-.29+	.54++	1.00	-.14	-.53++	.00		
100 SEED	WEIGHT	-.25	.27+	-.30+	-.14	1.00	.01	.00		
QUALITY	OF SEED	.13	.11	-.27+	-.53++	.01	1.00	.00		
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	1.00		

TABLE 149 EXPERIMENT 213 YEAR 1978

REGION - SOUTH AMERICA COUNTRY - PERU
 SITE - SULLANA ELEVATION - 80 M
 LATITUDE - 4 DEG. 51 MIN. S LONGITUDE - 80 DEG. 44 MIN. W
 COOPERATORS - ING. MANUEL GUERRERO RENTERIA AND TEC. A. ROBERTO PEREZ LAZO
 DATE PLANTED - JULY 6, 1978 DATE HARVESTED - OCTOBER, 1978
 SOIL TYPE - SAND 36.27%, SILT 35.06%, CLAY 28.67%, PH 8.03
 AMOUNT OF IRRIGATION - 814 MM
 NUMBER OF IRRIGATIONS - 5 (814 MM)
 SUBSTITUTE VARIETY - JUPITER
 LOCAL VARIETY - NACIONAL

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
6	JUPITER	1724.26	41.00	104.00	.00	.00	.00	.00	64.03	1.50
15	NACIONAL	1544.98	51.25	104.25	.00	.00	.00	.00	66.08	1.00
1	WILLIAMS	1120.43	27.00	70.00	.00	.00	.00	.00	23.08	3.00
5	MITCHELL	1027.08	25.00	72.25	.00	.00	.00	.00	28.70	2.50
7	IMPROVED PELICAN	896.01	38.00	81.00	.00	.00	.00	.00	39.83	1.00
2	CALLAND	860.80	25.00	73.50	.00	.00	.00	.00	26.48	3.00
12	COLUMBUS	813.29	24.50	76.25	.00	.00	.00	.00	23.33	2.75
13	UNION	799.12	27.00	70.00	.00	.00	.00	.00	23.80	2.75
4	CUTLER 71	760.36	28.00	72.75	.00	.00	.00	.00	26.03	4.00
16	CRAWFORD	699.72	25.00	71.25	.00	.00	.00	.00	24.98	2.25
11	ELF	659.09	24.00	69.25	.00	.00	.00	.00	17.45	1.25
3	FRANKLIN	599.91	26.00	71.25	.00	.00	.00	.00	21.20	2.00
8	STEELE	541.15	27.00	70.00	.00	.00	.00	.00	18.78	1.25
14	CORSOY	423.33	26.00	71.25	.00	.00	.00	.00	14.85	1.25
10	HODGSON	405.50	27.00	68.50	.00	.00	.00	.00	14.85	1.75
9	HARCOR	382.78	26.00	69.75	.00	.00	.00	.00	13.15	2.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.42++	.55++	.00	.00	.00	.00	.70++	.06
DAYS TO FLOWER		.42++	1.00	.89++	.00	.00	.00	.00	.85++	-.43++
DAYS TO MATURITY		.55++	.89++	1.00	.00	.00	.00	.00	.92++	-.32+
NODULE ABUND 1		.00	.00	.00	1.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	1.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	1.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	1.00	.00	.00
PLANT	HEIGHT	.70++	.85++	.92++	.00	.00	.00	.00	1.00	.00
LODGING		.06	-.43++	-.32+	.00	.00	.00	.00	-.21	1.00
SHATTER		.06	.25+	.17	.00	.00	.00	.00	.14	.10
HARVEST		.48++	.10	.13	.00	.00	.00	.00	.29+	.04
PODS PER PLANT		.78++	.52++	.64++	.00	.00	.00	.00	.73++	-.15
POD	HEIGHT	.52++	.85++	.86++	.00	.00	.00	.00	.89++	-.33++
100 SEED	WEIGHT	.61++	.37++	.44++	.00	.00	.00	.00	.51++	.04
QUALITY	OF SEED	.00	.00	.00	.00	.00	.00	.00	.00	.00
PERCENT	GERM.	.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 149

EXPERIMENT 213

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
6	JUPITER	1.00	195.00	18.00	13.90	18.63	.00	.00	40.3	19.8
15	NACIONAL	3.00	191.50	15.25	15.53	26.33	.00	.00	41.3	16.5
1	WILLIAMS	1.25	175.00	9.00	6.53	18.00	.00	.00	43.3	17.8
5	MITCHELL	1.50	201.75	10.75	6.58	16.63	.00	.00	40.0	19.9
7	IMPROVED PELICAN	1.00	183.00	13.50	8.75	12.13	.00	.00	41.6	17.0
2	CALLAND	1.50	180.25	7.00	6.73	18.25	.00	.00	42.0	17.6
12	COLUMBUS	1.75	161.00	10.75	6.13	15.50	.00	.00	44.9	17.3
13	UNION	1.25	202.00	7.50	6.03	16.13	.00	.00	43.2	17.2
4	CUTLER 71	2.00	149.75	8.50	6.50	16.13	.00	.00	42.6	16.9
16	CRAWFORD	1.25	115.50	6.75	5.25	16.63	.00	.00	43.2	17.3
11	ELF	1.25	190.50	9.50	6.40	15.00	.00	.00	41.6	17.0
3	FRANKLIN	2.50	163.00	9.00	7.03	14.25	.00	.00	42.0	16.1
8	STEELE	1.50	175.25	7.00	7.45	13.13	.00	.00	42.4	17.7
14	CORSOY	1.50	163.50	7.75	4.15	17.23	.00	.00	44.9	15.7
10	HODGSON	1.50	141.75	7.50	5.83	15.00	.00	.00	42.4	17.5
9	HARCOR	1.25	152.75	8.75	4.33	12.50	.00	.00	43.4	15.7
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 +- - PROB=.01)										
YIELD	KG/HA	.06	.48++	.78++	.52++	.61++	.00	.00	.00	.00
DAYS TO FLOWER		.25+	.10	.52++	.85++	.37++	.00	.00	.00	.00
DAYS TO MATURITY		.17	.13	.64++	.86++	.44++	.00	.00	.00	.00
NODULE ABUND 1		.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ABUND 2		.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00	.00	.00
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00	.00	.00
PLANT		.14	.29+	.73++	.89++	.51++	.00	.00	.00	.00
LODGING		.10	.04	-.15	-.33++	.04	.00	.00	.00	.00
SHATTER		1.00	.03	-.00	.24	.28+	.00	.00	.00	.00
HARVEST		.03	1.00	.30+	.21	.25+	.00	.00	.00	.00
PLANTS PER		-.00	.30+	1.00	.59++	.41++	.00	.00	.00	.00
PODS PER		.24	.21	.59++	1.00	.45++	.00	.00	.00	.00
HEIGHT		.28+	.25+	.41++	.45++	1.00	.00	.00	.00	.00
100 SEED		.00	.00	.00	.00	.00	1.00	.00	.00	.00
WEIGHT		.00	.00	.00	.00	.00	.00	.00	.00	.00
QUALITY OF SEED		.00	.00	.00	.00	.00	.00	.00	.00	.00
PERCENT		.00	.00	.00	.00	.00	.00	.00	.00	.00
GERM.		.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 150

EXPERIMENT 47

YEAR 1978

REGION - SOUTH AMERICA
 SITE - TINGO MARIA
 LATITUDE - 9 DEG. 45 MIN. S
 COOPERATOR - PEDRO RUIZ CUBILLAS
 SOIL TYPE - SAND 31%, SILT 29%, CLAY 40%, PH 5.8
 DATE PLANTED - JUNE 21, 1978
 LOCAL VARIETY - X-TULUMAYO

COUNTRY - PERU
 ELEVATION - 610 M
 LONGITUDE - 75 DEG. 54 MIN. W
 DATE HARVESTED - OCTOBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
13	X-TULUMAYO	2397.56	51.00	128.00	2.50	2.75	68.75	30.00	88.62	2.00
8	JUPITER	1845.37	45.00	105.00	3.00	2.50	76.25	30.00	46.75	1.75
2	SJ-2	1745.77	37.00	105.00	3.00	2.75	87.50	45.00	45.30	1.50
9	IMPROVED PELICAN	1695.76	35.00	91.00	3.50	2.75	85.00	38.75	43.18	1.50
15	DAVIS	1599.90	35.00	105.00	2.75	2.25	93.75	40.00	25.45	1.00
3	HARDEE LS	1561.56	45.00	111.00	2.75	2.50	38.75	31.25	32.53	1.25
6	TUNIA	1424.03	34.00	105.00	2.25	2.00	88.75	43.75	33.08	1.25
5	IAC-2	1300.26	35.00	99.00	3.00	2.50	96.25	60.00	34.90	1.00
12	WILLIAMS	1244.00	30.00	81.50	2.50	2.50	78.75	7.50	27.75	2.00
1	UFV-1	1241.91	35.00	99.00	2.75	2.75	87.50	23.75	27.00	1.25
14	COBB	1194.82	30.00	91.50	2.75	2.25	93.75	45.00	22.63	1.00
7	CARIBE	971.86	35.00	91.50	3.25	2.75	92.50	35.00	35.15	1.00
11	BOSSIER	961.44	33.00	91.50	2.25	2.75	90.00	18.75	32.10	1.00
4	ORBA	869.34	37.00	83.00	2.00	2.00	91.25	22.50	34.33	1.25
16	GASOY 17	680.97	30.00	81.50	2.50	2.25	87.50	11.25	21.15	1.50
10	RILLITO	575.11	30.00	88.50	2.25	2.25	90.00	2.50	27.33	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.64++	.70++	.29+	.10	-.33++	.25+	.58++	.36++
DAYS TO FLOWER		.64++	1.00	.82++	.08	.16	-.49++	.18	.74++	.31+
DAYS TO MATURITY		.70++	.82++	1.00	.09	.14	-.37++	.35++	.66++	.17
NODULE ABUND 1		.29+	.08	.09	1.00	.06	-.06	.27+	.18	.13
NODULE ABUND 2		.10	.16	.14	.06	1.00	-.02	-.01	.15	.07
NODULE ACT. 1		-.33++	-.49++	-.37++	-.06	-.02	1.00	.10	-.24	-.12
NODULE ACT. 2		.25+	.18	.35++	.27+	-.01	.10	1.00	.05	-.07
NODULE PLANT		.58++	.74++	.66++	.18	.15	-.24	.05	1.00	.40++
LOGGING		.36++	.31+	.17	.13	.07	-.12	-.07	.40++	1.00
SHATTER		-.06	-.13	-.17	-.14	-.11	.04	-.17	-.09	.18
PLANTS HARVEST		.10	.02	-.09	-.16	.15	.13	-.11	.08	.21
PODS PER PLANT		.52++	.58++	.57++	.30+	.04	-.56++	.23	.48++	.09
POD WEIGHT		.64++	.74++	.75++	.01	.19	-.34++	.12	.80++	.44++
100 SEED WEIGHT		.47++	.19	.45++	.03	-.17	-.14	.16	.25+	.25+
QUALITY OF SEED		-.41++	-.31+	-.27+	-.17	-.09	.13	-.21	-.13	-.17
PERCENT GERMIN.		.19	.24	.15	.08	.15	.09	.24	.36++	.21

TABLE 150 EXPERIMENT 47 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
13	X-TULUMAYO	1.00	200.50	26.25	15.30	18.50	2.25	86.75	44.5	18.9
8	JUPITER	1.00	166.25	22.00	6.70	17.48	2.50	48.50	41.7	23.8
2	SJ-2	1.00	158.75	30.50	7.60	14.50	1.00	94.25	44.1	20.0
9	IMPROVED PELICAN	1.00	175.75	20.25	6.25	14.20	1.00	65.75	42.9	17.4
15	DAVIS	1.00	178.00	14.75	5.55	18.00	1.00	40.00	41.2	18.8
3	HARDEE LS	1.00	132.75	33.25	6.85	15.45	1.25	37.50	43.9	21.9
6	TUNIA	1.00	120.25	22.75	6.50	20.85	2.50	61.25	43.4	21.1
5	IAC-2	1.00	111.00	22.50	5.90	16.75	3.00	86.75	41.6	23.0
12	WILLIAMS	1.25	193.75	14.50	5.45	18.55	2.00	72.00	42.0	21.0
1	UFV-1	1.00	202.75	13.50	5.20	14.75	1.00	88.75	41.7	17.6
14	COBB	1.00	195.50	14.00	4.10	16.98	3.00	33.00	40.2	20.9
7	CARIRE	1.00	146.50	17.75	4.60	12.25	2.50	78.25	46.4	17.5
11	BOSSIER	1.00	193.50	12.00	6.00	12.48	3.50	33.75	42.9	18.4
4	ORBA	1.00	180.50	17.00	4.95	12.63	1.50	91.25	40.7	19.0
16	GASOY 17	1.00	196.50	11.50	5.00	13.60	3.50	42.00	41.5	19.9
10	RILLITO	1.00	113.50	14.50	4.15	14.03	3.75	24.25	41.8	21.1
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS) *****										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	-.06	.10	.52++	.64++	.47++	-.41++	.19		
DAYS TO	FLOWER	-.13	.02	.58++	.74++	.19	-.31+	.24		
DAYS TO	MATURITY	-.17	-.09	.57++	.75++	.45++	-.27+	.15		
NODULE	ABUND 1	-.14	-.16	.30+	.01	.03	-.17	.08		
NODULE	ABUND 2	-.11	.15	.04	.19	-.17	-.09	.15		
NODULE	ACT. 1	.04	.13	-.56++	-.34++	-.14	.13	.09		
NODULE	ACT. 2	-.17	-.11	.23	.12	.16	-.21	.24		
PLANT	HEIGHT	-.09	.08	.48++	.80++	.25+	-.13	.36++		
LODGING		.18	.21	.09	.44++	.25+	-.17	.21		
SHATTER		1.00	.15	-.15	-.06	.06	-.02	.08		
HARVEST		.15	1.00	-.33++	.16	-.08	-.15	.04		
PODS PER	PLANT	-.15	-.33++	1.00	.41++	.25+	-.25+	.26+		
POD	HEIGHT	-.06	.16	.41++	1.00	.31+	-.14	.25+		
100 SEED	WEIGHT	.06	-.08	.25+	.31+	1.00	-.07	-.04		
QUALITY	OF SEED	-.02	-.15	-.25+	-.14	-.07	1.00	-.41++		
PERCENT	GERM.	.08	.04	.26+	.25+	-.04	-.41++	1.00		

TABLE 151 EXPERIMENT 148 YEAR 1978

REGION - SOUTH AMERICA COUNTRY - PERU
 SITE - TINGO MARIA ELEVATION - 610 M
 LATITUDE - 9 DEG. 45 MIN. S LONGITUDE - 75 DEG. 54 MIN. W
 COOPERATOR - PEDRO RUIZ CUBILLAS DATE HARVESTED - OCTOBER, 1978
 DATE PLANTED - JUNE 22, 1978
 SOIL TYPE - SAND 31%, SILT 29%, CLAY 40%, PH 5.8
 AMOUNT OF MOISTURE - 704 MM

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
1	IMPROVED PELICAN	1795.36	35.00	92.00	2.75	2.50	77.50	43.75	43.43	1.00
9	DAVIS	1604.07	35.00	103.00	2.50	2.25	93.75	63.75	25.78	1.00
13	CUTLER 71	1438.20	28.50	98.00	2.50	2.50	83.75	38.75	32.78	1.50
7	JAMES	1398.20	29.50	92.00	2.75	2.75	71.25	50.00	31.00	1.00
6	CORB	1344.85	29.50	103.00	2.25	2.50	96.25	63.75	27.15	1.00
14	MITCHELL	1229.41	29.50	95.00	2.75	2.50	80.00	33.75	33.60	2.00
3	BOSSIER	1176.49	33.00	98.00	2.75	3.00	76.25	30.00	31.68	1.75
4	WILLIAMS	1145.23	28.50	91.75	2.25	2.25	82.50	18.75	29.90	1.25
5	RANSOM	1078.55	28.50	103.00	2.50	2.75	88.75	36.25	23.78	1.00
15	BRAGG	941.02	29.50	95.00	2.75	2.75	91.25	21.25	25.65	1.00
8	FORREST	912.27	29.50	92.00	2.75	3.25	92.50	32.50	30.35	1.75
16	CRAWFORD	839.75	28.50	93.25	2.50	2.50	87.50	32.50	29.90	1.25
10	GASOY 17	758.48	28.50	88.50	2.75	3.00	91.25	33.75	20.00	1.25
11	CALLAND	710.98	28.50	88.50	2.50	2.75	83.75	30.00	28.43	1.00
12	FRANKLIN	699.31	28.50	88.50	2.50	3.50	91.25	20.00	27.00	1.00
2	RILLITO	661.80	29.50	90.00	2.25	2.50	70.00	15.00	29.53	1.25
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00	.56++	.37++	-.17	-.41++	.22	.54++	.56++	.07
DAYS TO	FLOWER	.56++	1.00	.21	.06	-.14	-.03	.25+	.39++	-.04
DAYS TO	MATURITY	.37++	.21	1.00	-.32++	-.21	.28+	.49++	-.05	.07
NODULE	ABUND 1	-.17	.06	1.00	1.00	.25+	-.48++	-.51++	-.16	-.06
NODULE	ABUND 2	-.41++	-.14	-.21	.25+	1.00	-.06	-.33++	-.34++	-.01
NODULE	ACT. 1	.22	-.03	.28+	-.48++	-.06	1.00	.49++	.11	.08
NODULE	ACT. 2	.54++	.25+	.49++	-.51++	-.33++	.49++	1.00	.30+	.07
NODULE	HEIGHT	.56++	.39++	-.05	-.16	-.34++	.11	.30+	.30+	.21
PLANT	LODGING	.07	-.04	.07	-.06	-.01	.08	.07	.21	1.00
PLANTS	SHATTER	-.13	-.05	-.26+	.09	.06	.11	-.19	-.04	-.07
PODS PER	HARVEST	.36++	.03	-.02	-.05	-.08	.22	.28+	.22	-.04
PODS PER	PLANT	.62++	.43++	.21	-.09	-.24	.08	.39++	.42++	-.04
POD	HEIGHT	.36++	.31+	.15	-.12	.04	.06	.28+	.25+	.06
100 SEED	WEIGHT	.38++	-.14	.26+	-.14	-.39++	.01	.17	.01	-.12
QUALITY	OF SEED	-.37++	-.42++	-.30+	-.05	.25+	.16	-.11	-.45++	-.17
PERCENT	GERM.	.21	.32++	-.38++	-.02	-.09	.14	.17	.37++	.02

TABLE 151

EXPERIMENT 148

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
1	IMPROVED PELICAN	1.00	215.00	21.50	6.40	14.93	1.50	72.75	43.4	20.8
9	DAVIS	1.00	174.25	16.25	6.30	18.40	2.75	54.00	41.2	20.2
13	CUTLER 71	1.00	219.75	13.25	7.00	19.33	3.00	38.25	41.1	19.6
7	JAMES	1.00	235.50	16.75	5.75	18.10	3.00	34.75	41.3	21.5
6	COBB	1.00	203.50	17.25	4.50	17.08	3.00	9.50	40.5	21.4
14	MITCHELL	1.00	159.75	12.75	5.15	17.55	2.75	56.25	36.9	22.8
3	BOSSIER	1.00	189.00	13.75	5.85	14.68	2.50	14.50	41.8	21.1
4	WILLIAMS	1.00	175.00	12.75	4.00	19.13	2.25	29.75	43.3	21.3
5	RANSOM	1.00	209.50	15.00	5.10	16.80	3.25	7.50	41.2	24.6
15	BAGG	1.00	223.75	9.50	5.40	15.18	3.75	33.50	41.6	19.6
8	FORREST	1.00	187.00	14.25	6.05	13.38	3.00	39.25	40.9	19.1
16	CRAMFORD	1.00	142.25	14.00	4.80	18.00	2.25	42.00	42.4	20.4
10	GASOY 17	1.00	181.50	10.25	4.65	15.53	5.00	46.75	41.2	19.9
11	CALLAND	1.00	233.50	11.50	6.00	16.35	5.25	52.00	41.2	18.7
12	FRANKLIN	1.25	204.00	9.25	5.60	15.90	5.00	49.50	40.9	21.8
2	RILLITO	1.00	150.50	13.50	3.60	14.18	3.00	27.00	42.7	20.5
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS) *****										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	-.13	.36++	.62++	.36++	.38++	-.37++	.21		
DAYS TO	FLOWER	-.05	.03	.43++	.31+	-.14	-.42++	.32++		
DAYS TO	MATURITY	-.26+	-.02	.21	.15	.26+	-.30+	-.38++		
NODULE	ABUND 1	.09	-.05	-.09	-.12	-.14	-.05	-.02		
NODULE	ABUND 2	.06	-.08	-.24	.04	-.39++	.25+	-.09		
NODULE	ACT. 1	.11	.24	.08	.06	.01	.16	.14		
NODULE	ACT. 2	-.19	.28+	.39++	.28+	.17	-.11	.17		
PLANT	HEIGHT	-.04	.22	.42++	.25+	.01	-.45++	.37++		
LODGING		-.07	-.22	-.04	.06	-.12	-.17	.02		
SHATTER		1.00	-.04	-.08	.06	-.08	.20	.17		
HARVEST		-.04	1.00	.17	.36++	.06	.29+	.09		
PODS PER	PLANT	-.08	.17	1.00	.13	.10	-.43++	.15		
POD	HEIGHT	.06	.36++	.13	1.00	.08	.04	.26+		
100 SEED	WEIGHT	-.08	.06	.10	.08	1.00	-.10	-.07		
QUALITY	OF SEED	.20	.29+	-.43++	.04	-.10	1.00	.00		
PERCENT	GERM.	.17	.09	.15	.26+	-.07	.00	1.00		

TABLE 152 EXPERIMENT 149 YEAR 1978

REGION - SOUTH AMERICA COUNTRY - PERU
 SITE - TINGO MARIA ELEVATION - 661 M
 LATITUDE - 9 DEG. 18 MIN. S LONGITUDE - 76 DEG. 1 MIN. E
 COOPERATORS - EDGARDO SEDANO V. AND RAMON RIOS R.
 DATE PLANTED - JULY 8, 1978 DATE HARVESTED - OCTOBER, 1978
 SOIL TYPE - FRANCO, SAND 50%, SILT 72%, CLAY 23%, PH 6.8
 FERTILIZER USED (KG/HA) - N 20.0, P 26.4, K 49.8

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LODGING
3	BOSSIER	2410.07	38.00	101.50	2.00	1.75	.00	.00	91.00	2.00
16	CRAWFORD	2335.47	31.00	98.00	1.25	1.00	.00	.00	74.50	2.00
13	CUTLER 71	2320.46	33.00	96.00	1.00	1.50	.00	.00	88.50	2.00
1	IMPROVED PELICAN	2318.38	34.25	97.00	2.50	1.75	.00	.00	68.75	2.00
4	WILLIAMS	2057.49	33.25	98.00	1.50	1.00	.00	.00	83.25	1.00
7	JAMES	2042.91	32.00	88.50	1.25	1.25	.00	.00	63.25	1.00
8	FORREST	2000.40	31.25	90.00	2.00	1.50	.00	.00	69.50	2.00
12	FRANKLIN	1982.48	34.50	91.50	2.00	1.75	.00	.00	68.75	2.50
2	RILLITO	1967.48	34.25	89.50	1.25	1.00	.00	.00	74.75	2.00
14	MITCHELL	1948.72	38.00	105.00	1.25	1.50	.00	.00	80.50	2.00
11	CALLAND	1930.39	32.25	98.00	1.50	1.25	.00	.00	59.00	2.00
5	RANSOM	1820.78	38.50	106.50	1.50	1.50	.00	.00	81.00	2.00
9	DAVIS	1804.11	31.25	98.00	1.50	1.00	.00	.00	74.00	1.00
15	BRAGG	1791.19	38.75	104.50	1.50	1.25	.00	.00	61.25	1.00
6	COBB	1768.27	34.00	96.00	2.75	1.50	.00	.00	82.50	2.50
10	GASDY 17	1661.58	30.75	89.00	2.00	2.00	.00	.00	52.00	1.00
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00								
DAYS TO FLOWER		.00		.03	-.05	.01	.00	.00	.36++	.24
DAYS TO MATURITY		1.00		.72++	.02	.12	.00	.00	.36++	.17
NODULE ABUND 1		-.05		1.00	-.07	-.02	.00	.00	.40++	.04
NODULE ABUND 2		.01		-.07	1.00	.54++	.00	.00	-.02	.13
NODULE ACT. 1		.00		-.02	.54++	1.00	.00	.00	-.04	.14
NODULE ACT. 2		.00		.00	.00	.00	1.00	.00	.00	.00
PLANT		.00		.00	.00	.00	.00	1.00	.00	.00
HEIGHT		.36++		.40++	-.02	-.04	.00	.00	1.00	.37++
LODGING		.24		.04	.13	.14	.00	.00	.37++	1.00
SHATTER		.20		-.01	-.10	-.14	.00	.00	.16	.40++
HARVEST		-.11		.04	.17	-.03	.00	.00	-.22	-.17
PLANTS PER		.34++		-.25+	.05	.02	.00	.00	-.02	.18
POD		.16		.36++	-.12	.00	.00	.00	.38++	.33++
100 SEED		-.22		.13	-.17	-.09	.00	.00	-.14	-.57++
WEIGHT		-.40++		.02	.06	.19	.00	.00	-.15	-.18
QUALITY OF SEED		.40++		-.03	-.07	.02	.00	.00	.32+	.24
PERCENT		.40++								

TABLE 152 EXPERIMENT 149 YEAR 1978 (CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
3	BOSSIER	2.00	189.75	24.00	6.20	16.68	2.00	97.50	43.4	23.4
16	CRAWFORD	2.00	179.50	19.00	4.83	20.03	1.00	99.75	43.0	22.4
13	CUTLER 71	3.00	180.50	19.50	5.43	23.13	2.00	98.75	42.4	22.7
1	IMPROVED PELICAN	2.00	205.50	33.75	5.58	14.78	1.00	96.50	43.1	21.0
4	WILLIAMS	3.00	185.50	21.25	5.35	20.63	2.00	98.25	43.3	22.6
7	JAMES	3.00	190.00	22.75	6.00	19.28	2.00	95.75	42.9	23.0
8	FORREST	1.00	201.50	16.25	4.65	17.15	3.00	96.00	39.8	24.3
12	FRANKLIN	2.00	176.00	23.00	5.95	17.15	2.00	98.25	39.9	21.9
2	RILLITO	2.00	182.00	34.00	5.28	15.48	1.00	97.25	41.8	24.4
14	MITCHELL	2.00	187.75	19.50	6.28	17.65	2.00	95.25	37.0	24.8
11	CALLAND	3.00	196.25	20.75	6.15	18.40	2.00	98.75	42.8	20.2
5	RANSOM	2.00	185.50	15.75	6.28	17.13	3.00	96.25	41.8	24.8
9	DAVIS	2.00	205.25	14.50	5.18	22.50	2.00	98.25	44.0	23.3
15	BRAGG	1.00	199.00	19.00	4.73	24.73	2.00	94.50	43.0	21.3
6	COBB	3.00	197.25	17.50	5.38	19.65	2.00	97.00	40.1	23.5
10	GASOY 17	1.00	191.75	18.00	4.08	21.58	3.00	94.75	40.2	22.6
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	.20	-11	.34++	.16	-.22	-.40++	.40++		
DAYS TO FLOWER		-.14	-.07	.09	.46++	-.16	.04	-.28+		
DAYS TO MATURITY		-.01	.04	-.25+	.36++	.13	.02	-.03		
NODULE AROUND 1		-.10	.17	.05	-.12	-.17	.06	-.07		
NODULE AROUND 2		-.14	-.03	.02	.00	-.09	.19	.02		
NODULE ACT. 1		.00	.00	.00	.00	.00	.00	.00		
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	.00		
PLANT		.00	.00	.00	.00	.00	.00	.00		
LODGING		.40++	-.22	-.02	.38++	-.14	-.15	.32+		
SHATTER		.16	-.17	.18	.33++	-.57++	-.18	.24		
HARVEST		1.00	1.00	.10	.51++	-.02	-.29+	.44++		
PLANTS		-.17	1.00	-.11	-.18	.04	.09	-.25		
PODS PER PLANT		.10	-.11	1.00	.18	-.56++	-.66++	.04		
POD HEIGHT		.51++	-.18	.18	1.00	-.44++	-.10	.13		
100 SEED WEIGHT		-.02	.04	-.56++	-.44++	1.00	.21	-.02		
QUALITY OF SEED		-.29+	.09	-.66++	-.10	.21	1.00	-.36++		
PERCENT GERM.		.44++	-.25	.04	.13	-.02	-.36++	1.00		

TABLE 153 EXPERIMENT 4 YEAR 1978

REGION - SOUTH AMERICA
 SITE - BARINAS
 LATITUDE - 8 DEG. 37 MIN. N
 COOPERATOR - RAUL NINO
 DATE PLANTED - JULY 20, 1978
 SOIL TYPE - SAND 71.8%, SILT 14.1%, CLAY 14.1%, PH 5.6
 FERTILIZER USED (KG/HA) - N 48.0, P 96.0, K 48.0
 AMOUNT OF MOISTURE - 926 MM

COUNTRY - VENEZUELA
 ELEVATION - 180 M
 LONGITUDE - 70 DEG. 12 MIN. W
 DATE HARVESTED - NOVEMBER, 1978

ENTRY NUMBER	VARIETY OR CROSS	YIELD KG/HA	DAYS TO FLOWER	DAYS TO MATURITY	NODULE ABUND 1	NODULE ABUND 2	NODULE ACT. 1	NODULE ACT. 2	PLANT HEIGHT	LOGGING
7	TUNIA	6553.81	40.50	131.50	1.00	1.00	.00	.00	70.25	1.00
2	UFV-1	5230.21	40.75	110.75	1.00	1.00	.00	.00	46.50	1.00
12	RILLITO	4966.41	34.00	118.25	1.00	1.00	.00	.00	62.75	1.25
9	JUPITER	4863.06	52.25	138.75	1.00	1.00	.00	.00	79.75	2.00
4	HARDEE LS	4742.20	41.75	139.25	1.00	1.00	.00	.00	54.75	1.50
16	COBB	4369.21	34.25	108.50	1.00	1.00	.00	.00	46.25	1.00
13	ROSSIER	4350.45	41.50	108.00	1.00	1.00	.00	.00	65.00	1.25
15	RANSOM	4226.68	33.00	111.00	1.00	1.00	.00	.00	40.50	1.00
14	WILLIAMS	4152.91	33.00	94.00	1.00	1.00	.00	.00	57.75	1.00
6	IAC-2	4077.07	40.50	138.50	1.00	1.00	.00	.00	93.00	1.75
10	IMPROVED PELICAN	3091.45	41.00	125.00	1.00	1.00	.00	.00	84.75	1.50
11	KAHALA	3016.85	38.25	106.25	1.00	1.00	.00	.00	57.25	1.75
8	CARIBE	2583.85	42.25	136.00	1.00	1.00	.00	.00	105.50	2.25
5	ORBA	2580.10	41.00	111.00	1.00	1.00	.00	.00	83.25	3.25
3	SJ-2	2485.50	42.75	138.75	1.00	1.00	.00	.00	80.75	2.00
1	CH-3	2398.81	40.50	138.50	1.00	1.00	.00	.00	101.00	3.75
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
CORRELATIONS (+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	1.00								
DAYS TO FLOWER		-.03	1.00							
DAYS TO MATURITY		-.08	.63++	1.00						
NODULE ABUND 1		.00	.00	.00	1.00					
NODULE ABUND 2		.00	.00	.00	.00	1.00				
NODULE ACT. 1		.00	.00	.00	.00	.00	1.00			
NODULE ACT. 2		.00	.00	.00	.00	.00	.00	1.00		
PLANT		.00	.00	.00	.00	.00	.00	.00	1.00	
LOGGING		-.46++	.49++	.60++	.00	.00	.00	.00	.64++	1.00
SHATTER		-.36++	.30+	.31+	.00	.00	.00	.00	.01	.33++
HARVEST		-.26+	-.43++	-.62++	.00	.00	.00	.00	-.15	.04
PODS PER PLANT		.32++	.40++	.55++	.00	.00	.00	.00	.65++	.25+
POD HEIGHT		-.30+	.46++	.43++	.00	.00	.00	.00	-.51++	-.38++
100 SEED WEIGHT		.46++	-.03	-.13	.00	.00	.00	.00	-.04	.00
QUALITY OF SEED		-.00	.10	-.10	.00	.00	.00	.00	.00	.00
PERCENT GERM.		.00	.00	.00	.00	.00	.00	.00	.00	.00

TABLE 153

EXPERIMENT 4

YEAR 1978

(CONTINUED)

ENTRY NUMBER	VARIETY OR CROSS	SHATTER	PLANTS HARVEST	PODS PER PLANT	POD HEIGHT	100 SEED WEIGHT	QUALITY OF SEED	PERCENT GERM.	PERCENT PROTEIN	PERCENT OIL
7	TUNIA	1.00	63.75	55.50	10.00	19.83	3.00	.00	46.4	22.9
2	UFV-1	1.00	124.25	40.00	9.00	19.68	3.75	.00	47.3	20.6
12	RILLITO	1.00	112.25	46.00	6.25	20.73	2.50	.00	22.6	23.3
9	JUPIER	1.00	107.50	47.50	9.25	23.80	3.50	.00	46.5	24.2
4	HARDEE LS	1.00	57.75	80.00	10.00	23.38	3.00	.00	46.5	24.0
16	COBB	2.00	174.25	32.00	7.25	20.10	3.25	.00	45.3	24.6
13	BOSSIER	1.00	136.75	38.00	12.25	18.25	3.25	.00	47.7	22.6
15	RANSOM	2.00	182.50	22.25	7.00	21.73	3.25	.00	45.5	25.6
14	WILLIAMS	1.00	200.75	19.25	8.00	21.93	3.25	.00	46.3	22.8
6	IAC-2	2.00	101.25	44.50	12.75	17.95	3.50	.00	47.9	21.4
10	IMPROVED PELICAN	1.00	195.50	31.50	12.25	15.60	3.50	.00	47.1	23.4
11	KAHALA	3.00	119.25	31.25	7.75	20.10	3.75	.00	45.4	23.3
8	CARIBE	1.00	97.25	40.50	13.00	16.53	3.50	.00	50.2	19.0
5	ORBA	5.00	143.75	38.25	11.75	15.88	3.00	.00	46.5	21.6
3	SJ-2	2.00	87.25	38.25	10.00	16.73	3.00	.00	47.4	21.2
1	CH-3	1.00	136.00	34.00	11.50	16.30	2.50	.00	48.2	22.3
GRAND MEAN										
STANDARD ERROR OF A VARIETY MEAN										
COEFFICIENT OF VARIATION										
5% LSD VARIETY MEANS (*****=NS)										
C O R R E L A T I O N S										
(+ - PROB=.05 ++ - PROB=.01)										
YIELD	KG/HA	-.36++	-.26+	.32++	-.30+	.46++	-.00	.00		
DAYS TO FLOWER		-.10	-.43++	.40++	.46++	-.03	.10	.00		
DAYS TO MATURITY		-.27+	-.62++	.55++	.43++	-.13	-.10	.00		
NORULE ARUND 1		.00	.00	.00	.00	.00	.00	.00		
NORULE ARUND 2		.00	.00	.00	.00	.00	.00	.00		
NORULE ACT. 1		.00	.00	.00	.00	.00	.00	.00		
NORULE ACT. 2		.00	.00	.00	.00	.00	.00	.00		
NORULE PLANT		.01	-.15	.04	.65++	-.51++	-.04	.00		
LODGING		.33++	.01	-.02	.25+	-.38++	-.13	.00		
SHATTER		1.00	.09	-.17	.01	-.25+	.02	.00		
HARVEST		.09	1.00	-.72++	-.18	-.08	.04	.00		
PLANTS PER PLANT		-.17	-.72++	1.00	.15	.23	-.01	.00		
PODS PER PLANT		.01	-.18	.15	1.00	-.45++	.05	.00		
HEIGHT		-.25+	-.08	.23	-.45++	1.00	.10	.00		
100 SEED WEIGHT		.02	.04	-.01	.05	.10	1.00	.00		
QUALITY OF SEED		.00	.00	.00	.00	.00	.00	1.00		
PERCENT GERM.										

